

# Ficha de datos de seguridad

## POLISH AND CLEAN



Ficha de datos de seguridad del 1/10/2024, Revisión 15

### SECCIÓN 1. Identificación de la sustancia o la mezcla y de la sociedad o la empresa

#### 1.1. Identificador de producto

Identificación del preparado:

Nombre comercial: POLISH AND CLEAN

Código comercial: 31025

#### 1.2. Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados

Uso recomendado:

Polish/abrillantador para carrocerías

Usos no recomendados:

Respetar estrictamente los usos recomendados.

#### 1.3. Datos del proveedor de la ficha de datos de seguridad

Proveedor:

Arexons S.p.A.

via Antica di Cassano, 23, 20063

Cernusco sul Naviglio (MI), Italy

Arexons S.p.A.

Tel. +39 (0)2/924361 - Fax +39 (0)2/92436306

Persona competente responsable de la ficha de datos de seguridad:

arexons@arexons.it

#### 1.4. Teléfono de emergencia

Arexons S.p.A.

Tel. +39 (0)2/924361 - Fax +39 (0)2/92436306

Teléfono de emergencias: + 34 91 562 04 20 (Solo emergencias toxicológicas. Información en español (24h/365 días))

### SECCIÓN 2. Identificación de los peligros

#### 2.1. Clasificación de la sustancia o de la mezcla

Criterios Reglamentación CE 1272/2008 (Clasificación, Etiquetado y Empacado):

⚠ Atención, Flam. Liq. 3, Líquidos y vapores inflamables.

⚠ Atención, Skin Irrit. 2, Provoca irritación cutánea.

⚠ Atención, Eye Irrit. 2, Provoca irritación ocular grave.

Efectos físico-químicos nocivos para la salud humana y para el medio ambiente:

Ningún otro riesgo

#### 2.2. Elementos de la etiqueta

Pictogramas de peligro:



Atención

Indicaciones de peligro:

H226 Líquidos y vapores inflamables.

H315 Provoca irritación cutánea.

H319 Provoca irritación ocular grave.

Consejos de prudencia:

P101 Si se necesita consejo médico, tener a mano el envase o la etiqueta.

P102 Mantener fuera del alcance de los niños.

P103 Leer atentamente y seguir todas las instrucciones.

P210 Mantener alejado del calor, de superficies calientes, de chispas, de llamas abiertas y de cualquier otra fuente de ignición. No fumar.

P370+P378 En caso de incendio: Utilizar un extintor de espuma para la extinción.

## Ficha de datos de seguridad

### POLISH AND CLEAN



P403+P235 Almacenar en un lugar bien ventilado. Mantener en lugar fresco.

P501 Eliminar el contenido/el recipiente en conformidad con la reglamentación.

Disposiciones especiales:

Ninguna

Disposiciones especiales de acuerdo con el anexo XVII del Reglamento REACH y sus posteriores modificaciones:

Ninguna

#### 2.3. Otros peligros

Ninguna sustancia PBT, mPmB o perturbador endocrino presente en concentración  $\geq 0.1\%$

Otros riesgos:

Ningún otro riesgo

### SECCIÓN 3. Composición/información sobre los componentes

#### 3.1. Sustancias

N.A.

#### 3.2. Mezclas

Componentes peligrosos según el Reglamento CLP y su correspondiente clasificación:

| Cantidad                      | Nombre                                                                             | Número de identif.                                                                                     | Clasificación                                                                                                                                                                                                                                                                               |
|-------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| $\geq 15\%$ -<br>$< 20\%$     | Idrocarburi C10-C13, n-<br>alcani, isoalcani, $< 2\%$<br>aromatici                 | EC: 940-726-3<br>REACH No.: 01-<br>2120083063<br>-63                                                   | 3.10/1 Asp. Tox. 1 H304<br>EUH066                                                                                                                                                                                                                                                           |
| $\geq 5\%$ -<br>$< 7\%$       | Hydrocarbons, C9-<br>C11, n-alkanes,<br>isoalkanes, cyclics, $< 2\%$<br>aromatics  | CAS: 64742-48-9<br>EC: 919-857-5<br>REACH No.: 01-<br>2119463258<br>-33                                | 2.6/3 Flam. Liq. 3 H226<br>3.10/1 Asp. Tox. 1 H304<br>3.8/3 STOT SE 3 H336<br>EUH066<br>DECLP (CLP)*                                                                                                                                                                                        |
| $\geq 5\%$ -<br>$< 7\%$       | Hydrocarbons, C12-<br>C15, n-alkanes,<br>isoalkanes, cyclics, $< 2\%$<br>aromatics | EC: 920-107-4<br>REACH No.: 01-<br>2119453414<br>-43                                                   | 3.10/1 Asp. Tox. 1 H304<br>EUH066                                                                                                                                                                                                                                                           |
| $\geq 1\%$ -<br>$< 2\%$       | 2-Aminoetanol;<br>etanolamina                                                      | Número 603-030-00-8<br>Index:<br>CAS: 141-43-5<br>EC: 205-483-3<br>REACH No.: 01-<br>2119486455<br>-28 | 3.2/1B Skin Corr. 1B H314<br>3.3/1 Eye Dam. 1 H318<br>3.1/4/Oral Acute Tox. 4 H302<br>3.1/4/Dermal Acute Tox. 4 H312<br>3.1/4/Inhal Acute Tox. 4 H332<br>3.8/3 STOT SE 3 H335<br>4.1/C3 Aquatic Chronic 3 H412<br>Límites de concentración<br>específicos:<br>C $\geq 5\%$ : STOT SE 3 H335 |
| $\geq 0,02\%$<br>- $< 0,05\%$ | N-C12-16 ALKYL<br>DIMETHYL BENZYL<br>AMMONIUM<br>CHLORIDE.                         | CAS: 68424-85-1<br>EC: 939-350-2<br>REACH No.: 01-<br>2119970550<br>-39                                | 2.16/1 Met. Corr. 1 H290<br>3.1/4/Oral Acute Tox. 4 H302<br>3.2/1B Skin Corr. 1B H314<br>3.3/1 Eye Dam. 1 H318<br>4.1/A1 Aquatic Acute 1 H400<br>M=10.<br>4.1/C1 Aquatic Chronic 1 H410                                                                                                     |

## Ficha de datos de seguridad

### POLISH AND CLEAN



\*DECLP (CLP): Sustancia clasificada de acuerdo con la nota P del anexo VI del Reglamento CE 1272/2008. Se aplica la clasificación armonizada como carcinógeno o mutágeno, salvo que pueda demostrarse que la sustancia contiene menos del 0,1 % en peso de benceno (n.º EINECS 200-753-7), en cuyo caso deberá aplicarse la clasificación de conformidad con el título II del presente Reglamento también a esas clases de peligro. Si la sustancia no está clasificada como carcinógeno o mutágeno, deberán aplicarse como mínimo los consejos de prudencia (P102-)P260-P262-P301 + P310-P331.

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#### SECCIÓN 4. Primeros auxilios

##### 4.1. Descripción de los primeros auxilios

En caso de contacto con la piel:

Quítese inmediatamente la ropa contaminada.

Lavar inmediatamente con abundante agua corriente y eventualmente jabón las zonas del cuerpo que han entrado en contacto con el producto, incluso si fuera sólo una sospecha.

Lavar completamente el cuerpo (ducha o baño).

Quitarse de inmediato la indumentaria contaminada y eliminarla de manera segura.

En caso de contacto con la piel, lavar de inmediato con abundante agua y jabón.

En caso de contacto con los ojos:

En caso de contacto con los ojos, enjuagarlos con agua durante un tiempo adecuado y manteniendo los párpados abiertos, luego consultar de inmediato con un oftalmólogo.

Proteger el ojo ileso.

En caso de ingestión:

No provocar el vómito en ningún caso. CONSULTAR INMEDIATAMENTE AL MÉDICO.

En caso de inhalación:

Llevar al accidentado al aire libre y mantenerlo en reposo y abrigado.

##### 4.2. Principales síntomas y efectos, agudos y retardados

Ninguno

##### 4.3. Indicación de toda atención médica y de los tratamientos especiales que deban dispensarse inmediatamente

En caso de accidente o malestar, consultar de inmediato con un médico (si es posible mostrarle las instrucciones de uso o la ficha de seguridad)

Tratamiento:

Ninguno

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#### SECCIÓN 5. Medidas de lucha contra incendios

##### 5.1. Medios de extinción

Medios de extinción apropiados:

Con anhídrido carbónico.

Con polvo.

Espuma

Agua vaporizada.

Medios de extinción no recomendados:

No usar chorros de agua directos

##### 5.2. Peligros específicos derivados de la sustancia o la mezcla

No inhalar los gases producidos por la explosión y por la combustión.

La combustión produce humo pesado.

##### 5.3. Recomendaciones para el personal de lucha contra incendios

Ropa normal para la lucha contra incendios, como un aparato respiratorio de aire comprimido de circuito abierto (EN 137), traje ignífugo (EN469), guantes ignífugos (EN 659) y botas de bombero (HO A29 o A30).

## Ficha de datos de seguridad

### POLISH AND CLEAN



#### SECCIÓN 6. Medidas en caso de vertido accidental

- 6.1. Precauciones personales, equipo de protección y procedimientos de emergencia
  - Usar los dispositivos de protección individual.
  - Quitar toda fuente de encendido.
  - Llevar las personas a un lugar seguro.
  - Consultar las medidas de protección expuestas en los puntos 7 y 8.
- 6.2. Precauciones relativas al medio ambiente
  - Evitar que el producto penetre en el suelo/subsuelo. Evitar que penetre en aguas superficiales o en el alcantarillado.
  - Conservar el agua de lavado contaminada y eliminarla.
  - En caso de fuga de gas o penetración en cursos de agua, suelo o sistema de alcantarillado, informar a las autoridades responsables.
  - Material apropiado para la recogida: material absorbente, orgánico, arena
- 6.3. Métodos y material de contención y de limpieza
  - Limpieza:
    - Evitar la presencia de llamas y/o chispas cerca de la pérdida y productos de desecho. No fumar.
  - Contener en caso de vertido de cantidades relevantes del producto y absorber cuando disperse. Contener el derrame de pequeñas cantidades de producto con tierra, arena, sepiolita, trapos u otro absorbente inerte.
  - Recuperar con paletas después de la absorción de disolvente y transferir en contenedores adecuados.
  - Desechar los residuos según la normativa vigente.
- 6.4. Referencia a otras secciones
  - Véanse también los apartados 8 y 13.

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#### SECCIÓN 7. Manipulación y almacenamiento

- 7.1. Precauciones para una manipulación segura
  - Evitar el contacto con la piel y los ojos, la inhalación de vapores y vahos.
  - No utilizar contenedores vacíos que no hayan sido previamente limpiados.
  - Antes de realizar las operaciones de transferencia, asegurarse de que en los contenedores no haya materiales residuos incompatibles.
  - Remitirse también al apartado 8 para los dispositivos de protección recomendados.

La indumentaria contaminada debe ser sustituida antes de acceder a las áreas de almuerzo.  
No comer ni beber durante el trabajo.
- 7.2. Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades
  - Conservar solo en el recipiente original.
  - Consérvese en ambientes siempre bien aireados.
  - Debe almacenarse a temperaturas inferiores a 50 °C. Manténgase alejado de llamas libres y fuentes de calor. Evite la exposición directa al sol.
  - Manténgase alejado de llamas libres, chispas y fuentes de calor. Evite la exposición directa al sol.
  - Mantener alejado de comidas, bebidas y piensos.
  - Materias incompatibles:
    - Ninguna en particular.
  - Indicaciones para los locales:
    - Frescos y adecuadamente aireados.
- 7.3. Usos específicos finales
  - Ningún uso particular

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#### SECCIÓN 8. Controles de exposición/protección individual

- 8.1. Parámetros de control
  - Idrocarburi C10-C13, n-alcani, isoalacani, < 2% aromatici
  - 20101.13 - TWA: 1050 mg/m<sup>3</sup>

## Ficha de datos de seguridad

### POLISH AND CLEAN



TLV TWA - 1660 mg/m<sup>3</sup>  
Hydrocarbons, C<sub>9</sub>-C<sub>11</sub>, n-alkanes, isoalkanes, cyclics, < 2% aromatics - CAS: 64742-48-9  
ACGIH - TWA: 1200 mg/m<sup>3</sup>, 197 ppm  
Hydrocarbons, C<sub>12</sub>-C<sub>15</sub>, n-alkanes, isoalkanes, cyclics, < 2% aromatics  
20101.10 - TWA: 200 mg/m<sup>3</sup>  
20101.12 - TWA: 1200 mg/m<sup>3</sup>, 150 ppm  
2-Aminoetanol; etanolamina - CAS: 141-43-5  
20101.11 - TWA: 7.6 mg/m<sup>3</sup>, 3 ppm  
UE - TWA(8h): 2.5 mg/m<sup>3</sup>, 1 ppm - STEL: 7.6 mg/m<sup>3</sup>, 3 ppm - Notas: Skin  
ACGIH - TWA(8h): 3 ppm - STEL: 6 ppm - Notas: Eye and skin irr

Valores límites de exposición DNEL

Hydrocarbons, C<sub>9</sub>-C<sub>11</sub>, n-alkanes, isoalkanes, cyclics, < 2% aromatics - CAS: 64742-48-9  
Trabajador profesional: 208 mg/kg - Exposición: Dérmica humana - Frecuencia: A largo plazo, efectos sistémicos  
Trabajador profesional: 871 mg/m<sup>3</sup> - Exposición: Por inhalación humana - Frecuencia: A largo plazo, efectos sistémicos  
Consumidor: 125 mg/kg - Exposición: Dérmica humana - Frecuencia: A largo plazo, efectos sistémicos  
Consumidor: 185 mg/m<sup>3</sup> - Exposición: Por inhalación humana - Frecuencia: A largo plazo, efectos sistémicos  
Consumidor: 125 mg/kg - Exposición: Oral humana - Frecuencia: A largo plazo, efectos sistémicos

2-Aminoetanol; etanolamina - CAS: 141-43-5  
Consumidor: 3.75 mg/kg - Exposición: Oral humana - Frecuencia: A largo plazo, efectos sistémicos  
Trabajador profesional: 0.51 mg/m<sup>3</sup> - Consumidor: 0.18 mg/m<sup>3</sup> - Exposición: Por inhalación humana - Frecuencia: A largo plazo, efectos locales  
Trabajador profesional: 3 mg/kg - Consumidor: 1.5 mg/kg - Exposición: Dérmica humana - Frecuencia: A largo plazo, efectos sistémicos

Valores límites de exposición PNEC

2-Aminoetanol; etanolamina - CAS: 141-43-5  
Objetivo: agua dulce - Valor: 0.07 mg/l  
Objetivo: Agua marina - Valor: 0.007 mg/l  
Objetivo: Sedimentos de agua dulce - Valor: 0.357 mg/kg  
Objetivo: Sedimentos de agua marina - Valor: 0.0357 mg/kg  
Objetivo: 09 - Valor: 100 mg/l

8.2. Controles de la exposición

Protección de los ojos:  
Gafas con protección lateral.  
Cumple con la norma EN 166

Protección de la piel:  
ropa protectora

Protección de las manos:  
Guantes de nitrilo o de Viton.  
Conformes EN 374.  
Grosor: Puño 0,10 mm; palma 0,12 mm; dedos 0,145 mm

Protección respiratoria:  
Use un dispositivo de protección respiratoria adecuado.

Riesgos térmicos:  
Ninguno

Controles de la exposición ambiental:  
Ninguno

Controles técnicos apropiados:  
Ninguno

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## SECCIÓN 9. Propiedades físicas y químicas

### 9.1. Información sobre propiedades físicas y químicas básicas

31025/15

Página nº. 5 de 14

## Ficha de datos de seguridad

### POLISH AND CLEAN



| Propiedad                                                                    | Valor                               | Método:    | Notas |
|------------------------------------------------------------------------------|-------------------------------------|------------|-------|
| Estado físico:                                                               | Líquido                             | --         | --    |
| Color:                                                                       | crema                               | --         | --    |
| Olor:                                                                        | característico                      | --         | --    |
| Punto de fusión/punto de congelación:                                        | N.A.                                | --         | --    |
| Punto de ebullición o punto inicial de ebullición e intervalo de ebullición: | N.A.                                | --         | --    |
| Inflamabilidad:                                                              | Flam. Liq. 3, H226                  | --         | --    |
| Límite superior e inferior de explosividad:                                  | N.A.                                | --         | --    |
| Punto de ignición (flash point, fp):                                         | 59°C                                | 08         | --    |
| Temperatura de autoencendido:                                                | N.A.                                | --         | --    |
| Temperatura de descomposición:                                               | N.A.                                | --         | --    |
| pH:                                                                          | 9.5                                 | ASTM D1287 | --    |
| Viscosidad cinemática:                                                       | > 20,5 mm <sup>2</sup> /sec (40 °C) | --         | --    |
| Hidrosolubilidad:                                                            | Miscible                            | --         | --    |
| Solubilidad en aceite:                                                       | N.A.                                | --         | --    |
| Coefficiente de reparto n-octanol/agua (valor logarítmico):                  | N.A.                                | --         | --    |
| Presión de vapor:                                                            | N.A.                                | --         | --    |
| Densidad y/o densidad relativa:                                              | 0,99                                | 08         | --    |
| Densidad de vapor relativa:                                                  | N.A.                                | --         | --    |
| Características de las partículas:                                           |                                     |            |       |
| Tamaño de las partículas:                                                    | N.A.                                | --         | --    |

#### 9.2. Otros datos

31025/15

Página nº. 6 de 14

## Ficha de datos de seguridad

### POLISH AND CLEAN



| Propiedad   | Valor | Método:     | Notas |
|-------------|-------|-------------|-------|
| Viscosidad: | >30 s | DIN ISO NF3 | --    |

#### SECCIÓN 10. Estabilidad y reactividad

- 10.1. Reactividad  
Estable en condiciones normales
- 10.2. Estabilidad química  
Estable a las temperaturas ambiente normales y si se usa como está recomendado.
- 10.3. Posibilidad de reacciones peligrosas  
Ninguno
- 10.4. Condiciones que deben evitarse  
Calor excesivo.
- 10.5. Materiales incompatibles  
Evitar el contacto con materiales oxidantes. El producto podría inflamarse.
- 10.6. Productos de descomposición peligrosos  
Ninguno.

#### SECCIÓN 11. Información toxicológica

11.1. Información sobre las clases de peligro definidas en el Reglamento (CE) n.º 1272/2008

Información toxicológica del producto:

POLISH AND CLEAN ML 500

- a) toxicidad aguda  
No clasificado  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- b) corrosión o irritación cutáneas  
El producto está clasificado: Skin Irrit. 2 H315
- c) lesiones o irritación ocular graves  
El producto está clasificado: Eye Irrit. 2 H319
- d) sensibilización respiratoria o cutánea  
No clasificado  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- e) mutagenicidad en células germinales  
No clasificado  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- f) carcinogenicidad  
No clasificado  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- g) toxicidad para la reproducción  
No clasificado  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- h) toxicidad específica en determinados órganos (STOT) – exposición única  
No clasificado  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- i) toxicidad específica en determinados órganos (STOT) – exposición repetida  
No clasificado  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- j) peligro de aspiración  
No clasificado  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

La información toxicológica de las sustancias principales halladas en el producto:

Idrocarburi C10-C13, n-alcani, isoalcani, < 2% aromatici

- a) toxicidad aguda:  
Ensayo: LD50 - Vía: Oral - Especies: Rata > 5000 mg/kg - Notas: OECD TG 401

## Ficha de datos de seguridad

### POLISH AND CLEAN



Ensayo: LD50 - Vía: Piel - Especies: Conejo > 5000 mg/kg - Notas: OECD TG 402  
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics - CAS: 64742-48-9

a) toxicidad aguda:

Ensayo: LC50 - Vía: Inhalación - Especies: Rata > 5000 mg/m<sup>3</sup> - Duración: 4h - Fuente: ECHA BP - SUPPLIER SDS

Ensayo: LD50 - Vía: Oral - Especies: Rata > 5000 mg/kg - Fuente: ECHA BP - SUPPLIER SDS

Ensayo: LD50 - Vía: Piel - Especies: Conejo > 5000 mg/kg - Fuente: ECHA BP - SUPPLIER SDS

h) toxicidad específica en determinados órganos (STOT) – exposición única:

Ensayo: oecd 12 Positivo - Fuente: SUPPLIER SDS - No hay datos disponibles para el producto

i) toxicidad específica en determinados órganos (STOT) – exposición repetida:

Ensayo: oecd 7 Negativo - Fuente: SUPPLIER SDS

Ensayo: NOAEL - Vía: Oral - Especies: Rata > 1000 mg/kg - Fuente: ECHA BP

Ensayo: NOAEL - Vía: Inhalación - Especies: Rata 200 ppm - Fuente: ECHA BP

Ensayo: NOAEC - Vía: Inhalación - Especies: Rata > 275 mg/m<sup>3</sup> - Fuente: ECHA BP

j) peligro de aspiración:

Ensayo: oecd 14 - Vía: Oral - Fuente: SUPPLIER SDS

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, cyclics, < 2% aromatics

a) toxicidad aguda:

Ensayo: LD50 - Vía: Piel - Especies: Conejo > 5000 mg/kg - Notas: OCSE 402

Ensayo: LC50 - Vía: Inhalación - Especies: Rata > 5000 mg/m<sup>3</sup> - Duración: 4h - Notas: OCSE 403

Ensayo: LD50 - Vía: Oral - Especies: Rata > 5000 mg/kg - Notas: OCSE 401

b) corrosión o irritación cutáneas:

Ensayo: Corrosivo para la piel - Vía: Piel Negativo - Notas: OCSE 404 - Può seccare la pelle e causare conseguenti dermatiti - A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

c) lesiones o irritación ocular graves:

Ensayo: Corrosivo para los ojos - Vía: OJO Negativo - Notas: OCSE 405 - Può causare disturbi lievi di breve durata agli occhi - A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

e) mutagenicidad en células germinales:

Ensayo: Mutagénesis 3 - Notas: OCSE 471, 473, 474, 476, 478, 479 - A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

f) carcinogenicidad:

Ensayo: Carcinogenicidad 3 - Notas: OCSE 453 - A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

g) toxicidad para la reproducción:

Ensayo: Toxicidad para la reproducción 3 - Notas: OCSE 413, 414, 415 - A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

i) toxicidad específica en determinados órganos (STOT) – exposición repetida:

3 - Notas: OCSE 408, 413 - A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

j) peligro de aspiración:

Positivo - Fuente: sulla base dei dati chimico-fisici

2-Aminoetanol; etanolamina - CAS: 141-43-5

a) toxicidad aguda:

Ensayo: LD50 - Vía: Oral - Especies: Rata = 1089 mg/kg

Ensayo: LD50 - Vía: Piel - Especies: Conejo = 2504 mg/kg

Ensayo: LC50 - Vía: Inhalación - Especies: Rata > 1.3 mg/l - Duración: 4h

b) corrosión o irritación cutáneas:

Ensayo: Corrosivo para los ojos Positivo - Notas: due to physical-chemical data (pH = 13)

Ensayo: Corrosivo para la piel Positivo - Notas: due to physical-chemical data (pH = 13)

N-C12-16 ALKYL DIMETHYL BENZYL AMMONIUM CHLORIDE. - CAS: 68424-85-1

a) toxicidad aguda:

Ensayo: LD50 - Vía: Oral - Especies: Rata 426 mg/kg

## Ficha de datos de seguridad

### POLISH AND CLEAN



Ensayo: LD50 - Vía: Piel - Especies: Rata 400-2000 mg/kg

#### 11.2. Información relativa a otros peligros

Propiedades de alteración endocrina:

Ningún perturbador endocrino presente en concentración  $\geq 0.1\%$

## SECCIÓN 12. Información ecológica

### 12.1. Toxicidad

Utilícese con técnicas de trabajo adecuadas, evitando la dispersión del producto en el medio ambiente.

Idrocarburi C10-C13, n-alcani, isoalacani, < 2% aromatici

a) Toxicidad acuática aguda:

Parámetro: LL50 - Especies: Peces > 1000 mg/l - Duración h.: 96

Parámetro: LL50 - Especies: Daphnia > 100 mg/l - Duración h.: 48

Parámetro: EL50 - Especies: Algas > 100 mg/l - Duración h.: 72

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclicis, < 2% aromatics - CAS: 64742-48-9

a) Toxicidad acuática aguda:

Parámetro: EL0 - Especies: Daphnia 1000 mg/l - Duración h.: 48

Parámetro: EL50 - Especies: Algas > 1000 mg/l - Duración h.: 72

Parámetro: LL50 - Especies: Peces > 1000 mg/l - Duración h.: 96

Parámetro: NOELR - Especies: Algas 100 mg/l - Duración h.: 72

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, cyclicis, < 2% aromatics

a) Toxicidad acuática aguda:

Parámetro: EL0 - Especies: Daphnia 1000 mg/l - Duración h.: 48

Parámetro: CE7 - Especies: Peces 1000 mg/l - Duración h.: 96

Parámetro: EL0 - Especies: Algas 1000 mg/l - Duración h.: 72

Parámetro: NOELR - Especies: Algas 1000 mg/l - Duración h.: 72

2-Aminoetanol; etanolamina - CAS: 141-43-5

a) Toxicidad acuática aguda:

Parámetro: LC50 - Especies: Peces = 349 mg/l - Duración h.: 96

Parámetro: EC50 - Especies: Daphnia = 27.04 mg/l - Duración h.: 48

Parámetro: EC50 - Especies: Algas = 2.8 mg/l - Duración h.: 2.8

N-C12-16 ALKYL DIMETHYL BENZYL AMMONIUM CHLORIDE. - CAS: 68424-85-1

a) Toxicidad acuática aguda:

Parámetro: EC50 - Especies: Algas 670 µg/l - Duración h.: 96

Parámetro: EC50 - Especies: Daphnia 5.9 ppb - Duración h.: 48

Parámetro: LC50 - Especies: Peces 0.28 ppm - Duración h.: 96

b) Toxicidad acuática crónica:

Parámetro: NOEC - Especies: Daphnia 0.025 mg/l - Duración h.: 504

### 12.2. Persistencia y degradabilidad

Ninguno

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, cyclicis, < 2% aromatics

Biodegradabilidad: Rápidamente degradable

2-Aminoetanol; etanolamina - CAS: 141-43-5

Biodegradabilidad: Rápidamente degradable - Ensayo: BIOGDG14 - Duración h.: 21GG - %: 91

N-C12-16 ALKYL DIMETHYL BENZYL AMMONIUM CHLORIDE. - CAS: 68424-85-1

Biodegradabilidad: Rápidamente degradable - Ensayo: BIOGDG08 - Duración h.: 28gg - %: 61

### 12.3. Potencial de bioacumulación

N.A.

### 12.4. Movilidad en el suelo

N.A.

### 12.5. Resultados de la valoración PBT y mPmB

Sustancias vPvB: Ninguna - Sustancias PBT: Ninguna

### 12.6. Propiedades de alteración endocrina

Ningún perturbador endocrino presente en concentración  $\geq 0.1\%$

## Ficha de datos de seguridad

### POLISH AND CLEAN



12.7. Otros efectos adversos  
Ninguno

#### SECCIÓN 13. Consideraciones relativas a la eliminación

- 13.1. Métodos para el tratamiento de residuos  
Recuperar si es posible. Enviar a centros de eliminación autorizados o a incineración en condiciones controladas. Operar conforme con las disposiciones locales y nacionales vigentes.

#### SECCIÓN 14. Información relativa al transporte



- 14.1. Número ONU o número ID  
ADR-UN Number: 1263  
IATA-UN Number: 1263  
IMDG-UN Number: 1263
- 14.2. Designación oficial de transporte de las Naciones Unidas  
ADR-Shipping Name: PINTURA (incluye pintura, laca, esmalte, colorante, goma laca, barniz, encáustico, apresto líquido y base líquida para lacas) o PRODUCTOS PARA PINTURA (incluye disolventes y diluyentes para pinturas)  
IATA-Shipping Name: PINTURA (incluye pintura, laca, esmalte, colorante, goma laca, barniz, encáustico, apresto líquido y base líquida para lacas) o PRODUCTOS PARA PINTURA (incluye disolventes y diluyentes para pinturas)  
IMDG-Shipping Name: PINTURA (incluye pintura, laca, esmalte, colorante, goma laca, barniz, encáustico, apresto líquido y base líquida para lacas) o PRODUCTOS PARA PINTURA (incluye disolventes y diluyentes para pinturas)
- 14.3. Clase(s) de peligro para el transporte  
ADR-Class: 3  
ADR - Número de identificación del peligro: 30  
IATA-Class: 3  
IATA-Label: 3  
IMDG-Class: 3  
IMDG-Clase: 3 PG III
- 14.4. Grupo de embalaje  
ADR-Packing Group: III  
IATA-Packing group: III  
IMDG-Packing group: III
- 14.5. Peligros para el medio ambiente  
ADR-Contaminante ambiental: No  
IMDG-Marine pollutant: No  
IMDG-EmS: F-E, S-E
- 14.6. Precauciones particulares para los usuarios  
ADR-Subsidiary hazards: -  
ADR-S.P.: 163 367 640E 650  
ADR-Categoría de transporte (Código de restricción en túneles): 3 (D/E)  
IATA-Passenger Aircraft: 355  
IATA-Subsidiary hazards: -  
IATA-Cargo Aircraft: 366  
IATA-S.P.: A3 A72 A192

## Ficha de datos de seguridad

### POLISH AND CLEAN



IATA-ERG: 3L  
IMDG-Subsidiary hazards: -  
IMDG-Stowage and handling: Category A  
IMDG-Segregation: -

14.7. Transporte marítimo a granel con arreglo a los instrumentos de la OMI  
N.A.  
Limited Quantity: 5 L  
Exempted Quantity: E1

---

## SECCIÓN 15. Información reglamentaria

15.1. Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla

Dir. 98/24/CE (Riesgos relacionados con los agentes químicos durante el trabajo)

Dir. 2000/39/CE (Valores límite de exposición profesional)

Reglamento (CE) n. 1907/2006 (REACH)

Reglamento (CE) n. 1272/2008 (CLP)

Reglamento (CE) n. 790/2009 (ATP 1 CLP) y (UE) n. 758/2013

Reglamento (UE) n. 2020/878

Reglamento (UE) n. 286/2011 (ATP 2 CLP)

Reglamento (UE) n. 618/2012 (ATP 3 CLP)

Reglamento (UE) n. 487/2013 (ATP 4 CLP)

Reglamento (UE) n. 944/2013 (ATP 5 CLP)

Reglamento (UE) n. 605/2014 (ATP 6 CLP)

Reglamento (UE) n. 2015/1221 (ATP 7 CLP)

Reglamento (UE) n. 2016/918 (ATP 8 CLP)

Reglamento (UE) n. 2016/1179 (ATP 9 CLP)

Reglamento (UE) n. 2017/776 (ATP 10 CLP)

Reglamento (UE) n. 2018/669 (ATP 11 CLP)

Reglamento (UE) n. 2018/1480 (ATP 13 CLP)

Reglamento (UE) n. 2019/521 (ATP 12 CLP)

Reglamento (UE) n. 2020/217 (ATP 14 CLP)

Reglamento (UE) n. 2020/1182 (ATP 15 CLP)

Reglamento (UE) n. 2021/643 (ATP 16 CLP)

Reglamento (UE) n. 2021/849 (ATP 17 CLP)

Reglamento (UE) n. 2022/692 (ATP 18 CLP)

Restricciones relacionadas con el producto o las sustancias contenidas, de acuerdo con el anexo XVII del Reglamento (CE) 1907/2006 (REACH) y las modificaciones posteriores:

Restricciones relacionadas con el producto:

Restricción 3

Restricción 40

Restricciones relacionadas con las sustancias contenidas:

Restricción 75

Pronto al Uso

Compuestos orgánicos volátiles - COV = 26.80 %

Compuestos orgánicos volátiles - COV = 268.00 g/Kg

Sustancias CMR volátiles = 0.00 %

COV halogenados a los cuales se haya asignado la frase de riesgo R40 = 0.00 %

Carbono Orgánico - C = 0.71

Cuando sean aplicables, hágase referencia a las siguientes normativas:

Directiva 2012/18/EU (Seveso III)

Reglamento (CE) no 648/2004 (detergentes).

Dir. 2004/42/CE (directiva COV)

Disposiciones sobre la directiva EU 2012/18 (Seveso III):

Categoría Seveso III de acuerdo con el anexo 1, parte 1  
el producto pertenece a la categoría: P5c

## Ficha de datos de seguridad

### POLISH AND CLEAN



#### 15.2. Evaluación de la seguridad química

No se ha realizado ninguna evaluación de la seguridad química para la mezcla

Sustancias para las cuales se ha realizado una evaluación de la seguridad química

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, cyclics, < 2% aromatics

2-Aminoetanol; etanolamina

## SECCIÓN 16. Otra información

Texto de las frases utilizadas en el párrafo 3:

H304 Puede ser mortal en caso de ingestión y penetración en las vías respiratorias.

EUH066 La exposición repetida puede provocar sequedad o formación de grietas en la piel.

H226 Líquidos y vapores inflamables.

H336 Puede provocar somnolencia o vértigo.

H314 Provoca quemaduras graves en la piel y lesiones oculares graves.

H318 Provoca lesiones oculares graves.

H302 Nocivo en caso de ingestión.

H312 Nocivo en contacto con la piel.

H332 Nocivo en caso de inhalación.

H335 Puede irritar las vías respiratorias.

H412 Nocivo para los organismos acuáticos, con efectos nocivos duraderos.

H290 Puede ser corrosivo para los metales.

H400 Muy tóxico para los organismos acuáticos.

H410 Muy tóxico para los organismos acuáticos, con efectos nocivos duraderos.

| Clase y categoría de peligro | Código       | Descripción                                                                    |
|------------------------------|--------------|--------------------------------------------------------------------------------|
| Met. Corr. 1                 | 2.16/1       | Corrosivos para los metales, Categoría 1                                       |
| Flam. Liq. 3                 | 2.6/3        | Líquidos inflamables, Categoría 3                                              |
| Acute Tox. 4                 | 3.1/4/Dermal | Toxicidad aguda (cutánea), Categoría 4                                         |
| Acute Tox. 4                 | 3.1/4/Inhal  | Toxicidad aguda (por inhalación), Categoría 4                                  |
| Acute Tox. 4                 | 3.1/4/Oral   | Toxicidad aguda (oral), Categoría 4                                            |
| Asp. Tox. 1                  | 3.10/1       | Peligro por aspiración, Categoría 1                                            |
| Skin Corr. 1B                | 3.2/1B       | Corrosión cutánea, Categoría 1B                                                |
| Skin Irrit. 2                | 3.2/2        | Irritación cutánea, Categoría 2                                                |
| Eye Dam. 1                   | 3.3/1        | Lesiones oculares graves, Categoría 1                                          |
| Eye Irrit. 2                 | 3.3/2        | Irritación ocular, Categoría 2                                                 |
| STOT SE 3                    | 3.8/3        | Toxicidad específica en determinados órganos (exposiciones única), Categoría 3 |
| Aquatic Acute 1              | 4.1/A1       | Peligro agudo para el medio ambiente acuático, Categoría 1                     |
| Aquatic Chronic 1            | 4.1/C1       | Peligro crónico (a largo plazo) para el medio ambiente acuático, Categoría 1   |
| Aquatic Chronic 3            | 4.1/C3       | Peligro crónico (a largo plazo) para el medio                                  |

## Ficha de datos de seguridad

### POLISH AND CLEAN



|  |  |                                |
|--|--|--------------------------------|
|  |  | ambiente acuático, Categoría 3 |
|--|--|--------------------------------|

Parágrafos modificados respecto la revisión anterior

#### SECCIÓN 9. Propiedades físicas y químicas

Clasificación y procedimiento utilizado para determinar la clasificación de las mezclas con arreglo al Reglamento (CE) nº 1272/2008 [CLP]:

| Clasificación con arreglo al Reglamento (CE) nº 1272/2008 | Procedimiento de clasificación            |
|-----------------------------------------------------------|-------------------------------------------|
| Flam. Liq. 3, H226                                        | Conforme a datos obtenidos de los ensayos |
| Skin Irrit. 2, H315                                       | Método de cálculo                         |
| Eye Irrit. 2, H319                                        | Método de cálculo                         |

Este documento ha sido preparado por una persona competente que ha recibido un entrenamiento adecuado

Principales fuentes bibliográficas:

ECDIN: Environmental Chemicals Data and Information Network, Centro Común de Investigación, Comisión de las Comunidades Europeas

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, 8ª ed., Van Nostrand Reinold

La información aquí detallada se basa en nuestros conocimientos hasta la fecha señalada arriba. Se refiere exclusivamente al producto indicado y no constituye garantía de cualidades particulares. El usuario debe asegurarse de la idoneidad y exactitud de dicha información en relación al uso específico que debe hacer del producto.

Esta ficha anula y sustituye toda edición precedente.

|             |                                                                                                            |
|-------------|------------------------------------------------------------------------------------------------------------|
| ADR:        | Acuerdo europeo relativo al transporte internacional de mercancías peligrosas por carretera.               |
| CAS:        | Chemical Abstracts Service (de la American Chemical Society).                                              |
| CLP:        | Clasificación, etiquetado, embalaje.                                                                       |
| DNEL:       | Nivel sin efecto derivado.                                                                                 |
| EINECS:     | Catálogo Europeo de Sustancias Químicas Comercializadas.                                                   |
| ETA:        | Estimación de la toxicidad aguda                                                                           |
| ETAmix:     | Estimación de Toxicidad Aguda (Mezclas)                                                                    |
| GefStoffVO: | Ordenanza sobre sustancias peligrosas, Alemania.                                                           |
| GHS:        | Sistema Globalmente Armonizado de clasificación y etiquetado de productos químicos.                        |
| IATA:       | Asociación de Transporte Aéreo Internacional.                                                              |
| IATA-DGR:   | Normas aplicadas a las mercancías peligrosas por la "Asociación de Transporte Aéreo Internacional" (IATA). |
| ICAO:       | Organización de la Aviación Civil Internacional.                                                           |
| ICAO-TI:    | Instrucciones Técnicas de la "Organización de la Aviación Civil Internacional" (OACI).                     |
| IMDG:       | Código marítimo internacional de mercancías peligrosas.                                                    |
| INCI:       | Nomenclatura internacional de ingredientes cosméticos.                                                     |
| KSt:        | Coeficiente de explosión.                                                                                  |
| LC50:       | Concentración letal para el 50% de la población expuesta.                                                  |
| LD50:       | Dosis letal para el 50% de la población expuesta.                                                          |
| NA:         | No aplicable                                                                                               |

## Ficha de datos de seguridad

### POLISH AND CLEAN



|       |                                                                                        |
|-------|----------------------------------------------------------------------------------------|
| PNEC: | Concentración prevista sin efecto.                                                     |
| RID:  | Normas relativas al transporte internacional de mercancías peligrosas por ferrocarril. |
| STEL: | Nivel de exposición de corta duración.                                                 |
| STOT: | Toxicidad específica en determinados órganos.                                          |
| TLV:  | Valor límite del umbral.                                                               |
| TWA:  | Promedio ponderado en el tiempo                                                        |
| WGK:  | Clase de peligro para las aguas (Alemania).                                            |

# Exposure Scenario, 08/07/2019

| Substance identity |                                                                              |
|--------------------|------------------------------------------------------------------------------|
| Chemical name      | Hydrocarbons C9-C11 cyclics-iso-alkanes <2% aromatics, declass. ex Notes "p" |
| CAS No.            | 64742-48-9                                                                   |
| EINECS No.         | 919-857-5                                                                    |

## Table of contents

1. **ES 1** Formulation or re-packing; Solvent-based process
2. **ES 2** Use at industrial site
3. **ES 3** Use at industrial site
4. **ES 4** Widespread use by professional workers
5. **ES 5** Widespread use by professional workers
6. **ES 6** Consumer use; Various products (PC1, PC24, PC31)
7. **ES 7** Consumer use; Various products (PC1, PC24, PC31)
8. **ES 8** Consumer use; Adhesives, sealants (PC1)
9. **ES 9** Consumer use; Various products (PC39, PC28)

| 1. ES 1 Formulation or re-packing; Solvent-based process                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1 TITLE SECTION                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Exposure Scenario name                                                                                                               | Formulation and (re) packaging of substances and mixtures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Date - Version                                                                                                                       | 28/06/2019 - 1.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Life Cycle Stage                                                                                                                     | Formulation or re-packing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Main user group                                                                                                                      | Industrial uses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Sector(s) of use                                                                                                                     | Industrial uses (SU3) - Formulation [mixing] of preparations and/or re-packaging (SU10)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Environment Contributing Scenario                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| CS1 Wet formulation                                                                                                                  | ERC2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Worker Contributing Scenario                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| CS2 General exposures                                                                                                                | PROC5 - PROC1 - PROC2 - PROC3 - PROC4 - PROC8a - PROC8b - PROC9 - PROC14 - PROC15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 1.2 Conditions of use affecting exposure                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 1.2. CS1: Environment Contributing Scenario: Wet formulation (ERC2)                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Environmental release categories                                                                                                     | Formulation into mixture (ERC2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <i>Product (article) characteristics</i>                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Physical form of product:<br>Liquid                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 1.2. CS2: Worker Contributing Scenario: General exposures (PROC5, PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC14, PROC15) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Process Categories                                                                                                                   | Mixing or blending in batch processes - Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - Chemical production where opportunity for exposure arises - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - Transfer of substance or mixture (charging and discharging) at dedicated facilities - Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - Tableting, compression, extrusion, pelletisation, granulation - Use as laboratory reagent (PROC5, PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC14, PROC15) |
| <i>Product (article) characteristics</i>                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Physical form of product:<br>Liquid                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <i>Amount used, frequency and duration of use/exposure</i>                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Duration:<br>Covers daily exposures up to 8 hours                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <i>Other conditions affecting worker exposure</i>                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Temperature: Assumes use at not more than 20 °C above ambient temperature. 20°C                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 1.3 Exposure estimation and reference to its source                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| N/A                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 1.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

**Guidance to check compliance with the exposure scenario:**

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## 2. ES 2 Use at industrial site

### 2.1 TITLE SECTION

|                        |                        |
|------------------------|------------------------|
| Exposure Scenario name | Lubricating agent      |
| Date - Version         | 28/06/2019 - 1.0       |
| Life Cycle Stage       | Use at industrial site |
| Main user group        | Industrial uses        |
| Sector(s) of use       | Industrial uses (SU3)  |

#### Environment Contributing Scenario

|                           |             |
|---------------------------|-------------|
| CS1 Solvent-based process | ERC4 - ERC7 |
|---------------------------|-------------|

#### Worker Contributing Scenario

|                                                   |                                                                                                     |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| CS2 General measures applicable to all activities | PROC1 - PROC2 - PROC3 - PROC4 - PROC7 - PROC8a - PROC8b - PROC9 - PROC10 - PROC13 - PROC17 - PROC18 |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------|

### 2.2 Conditions of use affecting exposure

#### 2.2. CS1: Environment Contributing Scenario: Solvent-based process (ERC4, ERC7)

|                                  |                                                                                                                                                     |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental release categories | Use of non-reactive processing aid at industrial site (no inclusion into or onto article) - Use of functional fluid at industrial site (ERC4, ERC7) |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|

#### 2.2. CS2: Worker Contributing Scenario: General measures applicable to all activities (PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC17, PROC18)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process Categories | Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - Chemical production where opportunity for exposure arises - Industrial spraying - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - Transfer of substance or mixture (charging and discharging) at dedicated facilities - Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - Roller application or brushing - Treatment of articles by dipping and pouring - Lubrication at high energy conditions in metal working operations - General greasing/lubrication at high kinetic energy conditions (PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC17, PROC18) |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### Product (article) characteristics

##### Physical form of product:

Liquid

#### Amount used, frequency and duration of use/exposure

##### Duration:

Covers daily exposures up to 8 hours

#### Conditions and measures related to personal protection, hygiene and health evaluation

##### Personal protection

Wear suitable gloves tested to EN374.

#### Other conditions affecting worker exposure

**Temperature:** Assumes use at not more than 20 °C above ambient temperature.

### 2.3 Exposure estimation and reference to its source

N/A

## 2.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

### **Guidance to check compliance with the exposure scenario:**

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

| 3. ES 3 Use at industrial site                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>3.1 TITLE SECTION</b>                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Exposure Scenario name                                                                                                                               | Lubricants - Industrial use                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Date - Version                                                                                                                                       | 28/06/2019 - 1.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Life Cycle Stage                                                                                                                                     | Use at industrial site                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Main user group                                                                                                                                      | Industrial uses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Sector(s) of use                                                                                                                                     | Industrial uses (SU3)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Environment Contributing Scenario</b>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| CS1 Solvent-based process                                                                                                                            | ERC4 - ERC7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Worker Contributing Scenario</b>                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| CS2 Lubricants                                                                                                                                       | PROC1 - PROC2 - PROC3 - PROC4 - PROC7 - PROC8a - PROC8b - PROC9 - PROC10 - PROC13 - PROC17 - PROC18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>3.2 Conditions of use affecting exposure</b>                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>3.2. CS1: Environment Contributing Scenario: Solvent-based process (ERC4, ERC7)</b>                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Environmental release categories                                                                                                                     | Use of non-reactive processing aid at industrial site (no inclusion into or onto article) - Use of functional fluid at industrial site (ERC4, ERC7)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <i>Product (article) characteristics</i>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Physical form of product:                                                                                                                            | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>3.2. CS2: Worker Contributing Scenario: Lubricants (PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC17, PROC18)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Process Categories                                                                                                                                   | Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - Chemical production where opportunity for exposure arises - Industrial spraying - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - Transfer of substance or mixture (charging and discharging) at dedicated facilities - Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - Roller application or brushing - Treatment of articles by dipping and pouring - Lubrication at high energy conditions in metal working operations - General greasing/lubrication at high kinetic energy conditions (PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC17, PROC18) |
| <i>Product (article) characteristics</i>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Physical form of product:                                                                                                                            | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Concentration of substance in product:                                                                                                               | Covers percentage substance in the product up to 100 %.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <i>Amount used, frequency and duration of use/exposure</i>                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Duration:                                                                                                                                            | Covers daily exposures up to 8 hours                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <i>Technical and organisational conditions and measures</i>                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Technical and organisational measures                                                                                                                | Use in contained systems                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

### *Conditions and measures related to personal protection, hygiene and health evaluation*

#### **Personal protection**

Wear suitable gloves tested to EN374.

#### *Other conditions affecting worker exposure*

**Temperature:** Assumes use at not more than 20 °C above ambient temperature.

### 3.3 Exposure estimation and reference to its source

N/A

### 3.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

#### **Guidance to check compliance with the exposure scenario:**

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## 4. ES 4 Widespread use by professional workers

### 4.1 TITLE SECTION

|                        |                                        |
|------------------------|----------------------------------------|
| Exposure Scenario name | Lubricants - Industrial use            |
| Date - Version         | 28/06/2019 - 1.0                       |
| Life Cycle Stage       | Widespread use by professional workers |
| Main user group        | Professional uses                      |
| Sector(s) of use       | Professional uses (SU22)               |

### Environment Contributing Scenario

|                           |               |
|---------------------------|---------------|
| CS1 Solvent-based process | ERC9a - ERC9b |
|---------------------------|---------------|

### Worker Contributing Scenario

|                |                                                                                                       |
|----------------|-------------------------------------------------------------------------------------------------------|
| CS2 Lubricants | PROC20 - PROC1 - PROC2 - PROC3 - PROC8a - PROC8b - PROC9 - PROC10 - PROC11 - PROC13 - PROC17 - PROC18 |
|----------------|-------------------------------------------------------------------------------------------------------|

## 4.2 Conditions of use affecting exposure

### 4.2. CS1: Environment Contributing Scenario: Solvent-based process (ERC9a, ERC9b)

|                                  |                                                                                                           |
|----------------------------------|-----------------------------------------------------------------------------------------------------------|
| Environmental release categories | Widespread use of functional fluid (indoor) - Widespread use of functional fluid (outdoor) (ERC9a, ERC9b) |
|----------------------------------|-----------------------------------------------------------------------------------------------------------|

### 4.2. CS2: Worker Contributing Scenario: Lubricants (PROC20, PROC1, PROC2, PROC3, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC17, PROC18)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process Categories | Use of functional fluids in small devices - Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - Transfer of substance or mixture (charging and discharging) at dedicated facilities - Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - Roller application or brushing - Non industrial spraying - Treatment of articles by dipping and pouring - Lubrication at high energy conditions in metal working operations - General greasing/lubrication at high kinetic energy conditions (PROC20, PROC1, PROC2, PROC3, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC17, PROC18) |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Product (article) characteristics

|                           |        |
|---------------------------|--------|
| Physical form of product: | Liquid |
|---------------------------|--------|

|                                        |                                                         |
|----------------------------------------|---------------------------------------------------------|
| Concentration of substance in product: | Covers percentage substance in the product up to 100 %. |
|----------------------------------------|---------------------------------------------------------|

### Amount used, frequency and duration of use/exposure

|           |                                      |
|-----------|--------------------------------------|
| Duration: | Covers daily exposures up to 8 hours |
|-----------|--------------------------------------|

## 4.3 Exposure estimation and reference to its source

N/A

## 4.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

**Guidance to check compliance with the exposure scenario:**

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## 5. ES 5 Widespread use by professional workers

### 5.1 TITLE SECTION

|                        |                                        |
|------------------------|----------------------------------------|
| Exposure Scenario name | Lubricants (high power)                |
| Date - Version         | 28/06/2019 - 1.0                       |
| Life Cycle Stage       | Widespread use by professional workers |
| Main user group        | Professional uses                      |
| Sector(s) of use       | Professional uses (SU22)               |

#### Environment Contributing Scenario

|                           |               |
|---------------------------|---------------|
| CS1 Solvent-based process | ERC8a - ERC8d |
|---------------------------|---------------|

#### Worker Contributing Scenario

|                |                                                                                                               |
|----------------|---------------------------------------------------------------------------------------------------------------|
| CS2 Lubricants | PROC20 - PROC1 - PROC2 - PROC3 - PROC4 - PROC8a - PROC8b - PROC9 - PROC10 - PROC11 - PROC13 - PROC17 - PROC18 |
|----------------|---------------------------------------------------------------------------------------------------------------|

### 5.2 Conditions of use affecting exposure

#### 5.2. CS1: Environment Contributing Scenario: Solvent-based process (ERC8a, ERC8d)

|                                  |                                                                                                                                                                                                       |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental release categories | Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) - Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8a, ERC8d) |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### *Product (article) characteristics*

##### Physical form of product:

Liquid

#### 5.2. CS2: Worker Contributing Scenario: Lubricants (PROC20, PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC17, PROC18)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process Categories | Use of functional fluids in small devices - Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - Chemical production where opportunity for exposure arises - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - Transfer of substance or mixture (charging and discharging) at dedicated facilities - Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - Roller application or brushing - Non industrial spraying - Treatment of articles by dipping and pouring - Lubrication at high energy conditions in metal working operations - General greasing/lubrication at high kinetic energy conditions (PROC20, PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC17, PROC18) |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### *Product (article) characteristics*

##### Physical form of product:

Liquid

##### Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

#### *Amount used, frequency and duration of use/exposure*

##### Duration:

Covers daily exposures up to 8 hours

*Conditions and measures related to personal protection, hygiene and health evaluation*

**Personal protection**

Wear suitable gloves tested to EN374.

**5.3 Exposure estimation and reference to its source**

N/A

**5.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES**

**Guidance to check compliance with the exposure scenario:**

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## 6. ES 6 Consumer use; Various products (PC1, PC24, PC31)

### 6.1 TITLE SECTION

|                        |                                                                                                           |
|------------------------|-----------------------------------------------------------------------------------------------------------|
| Exposure Scenario name | Lubricants (low release)                                                                                  |
| Date - Version         | 28/06/2019 - 1.0                                                                                          |
| Life Cycle Stage       | Consumer use                                                                                              |
| Main user group        | Consumer uses                                                                                             |
| Sector(s) of use       | Consumer uses (SU21)                                                                                      |
| Product Categories     | Adhesives, sealants (PC1) - Lubricants, greases, release products (PC24) - Polishes and wax blends (PC31) |

#### Environment Contributing Scenario

|                           |               |
|---------------------------|---------------|
| CS1 Solvent-based process | ERC9a - ERC9b |
|---------------------------|---------------|

#### Consumer Contributing Scenario

CS2 Lubricants

### 6.2 Conditions of use affecting exposure

#### 6.2. CS1: Environment Contributing Scenario: Solvent-based process (ERC9a, ERC9b)

|                                  |                                                                                                           |
|----------------------------------|-----------------------------------------------------------------------------------------------------------|
| Environmental release categories | Widespread use of functional fluid (indoor) - Widespread use of functional fluid (outdoor) (ERC9a, ERC9b) |
|----------------------------------|-----------------------------------------------------------------------------------------------------------|

#### *Product (article) characteristics*

##### Physical form of product:

Liquid, vapour pressure < 0,5 kPa at STP

#### 6.2. CS2: Consumer Contributing Scenario: Lubricants

#### *Product (article) characteristics*

##### Physical form of product:

Liquid

##### Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

#### *Amount used, frequency and duration of use/exposure*

##### Frequency:

Covers exposure up to 1 events per day

#### *Other conditions affecting consumers exposure*

**Temperature:** Covers use at ambient temperatures.

### 6.3 Exposure estimation and reference to its source

N/A

### 6.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

#### Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## 7. ES 7 Consumer use; Various products (PC1, PC24, PC31)

### 7.1 TITLE SECTION

|                        |                                                                                                           |
|------------------------|-----------------------------------------------------------------------------------------------------------|
| Exposure Scenario name | Lubricants (low release)                                                                                  |
| Date - Version         | 01/07/2019 - 1.0                                                                                          |
| Life Cycle Stage       | Consumer use                                                                                              |
| Main user group        | Consumer uses                                                                                             |
| Sector(s) of use       | Consumer uses (SU21)                                                                                      |
| Product Categories     | Adhesives, sealants (PC1) - Lubricants, greases, release products (PC24) - Polishes and wax blends (PC31) |

### Environment Contributing Scenario

|                           |               |
|---------------------------|---------------|
| CS1 Solvent-based process | ERC9a - ERC9b |
|---------------------------|---------------|

### Consumer Contributing Scenario

|                |                                        |
|----------------|----------------------------------------|
| CS2 Lubricants | PC24                                   |
| CS3 Lubricants | PC1                                    |
| CS4 Lubricants | PC31 - PC23_1, PC31_1 - PC23_2, PC31_2 |

## 7.2 Conditions of use affecting exposure

### 7.2. CS1: Environment Contributing Scenario: Solvent-based process (ERC9a, ERC9b)

|                                  |                                                                                                           |
|----------------------------------|-----------------------------------------------------------------------------------------------------------|
| Environmental release categories | Widespread use of functional fluid (indoor) - Widespread use of functional fluid (outdoor) (ERC9a, ERC9b) |
|----------------------------------|-----------------------------------------------------------------------------------------------------------|

### 7.2. CS2: Consumer Contributing Scenario: Lubricants (PC24)

|                    |                                              |
|--------------------|----------------------------------------------|
| Product Categories | Lubricants, greases, release products (PC24) |
|--------------------|----------------------------------------------|

### *Product (article) characteristics*

#### Physical form of product:

Liquid, vapour pressure < 0,5 kPa at STP

#### Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

### *Amount used, frequency and duration of use/exposure*

#### Frequency:

Covers exposure up to 1 uses per day

#### Frequency:

Covers exposure up to 4 days per year

### *Other conditions affecting consumers exposure*

Indoor use

**Room size:** Covers use in a one car garage (>34 m<sup>3</sup>) under typical ventilation.

**Temperature:** Covers use at ambient temperatures.

**Ventilation rate:** Covers use under typical household ventilation.

### 7.2. CS3: Consumer Contributing Scenario: Lubricants (PC1)

|                    |                           |
|--------------------|---------------------------|
| Product Categories | Adhesives, sealants (PC1) |
|--------------------|---------------------------|

### *Product (article) characteristics*

**Physical form of product:**

Liquid, vapour pressure < 0,5 kPa at STP

**Concentration of substance in product:**

Covers concentrations up to 30 %

***Amount used, frequency and duration of use/exposure*****Frequency:**

Covers use up to 1 uses per day

**Frequency:**

Covers exposure up to 365 days per year

***Other conditions affecting consumers exposure***

Indoor use

**Room size:** Covers use in room size of 20 m<sup>3</sup>

**Temperature:** Covers use at ambient temperatures.

**Ventilation rate:** Covers use under typical household ventilation.

**7.2. CS4: Consumer Contributing Scenario: Lubricants (PC31)****Product Categories**

Polishes and wax blends (PC31)

**Product (Sub-)Categories**

Polishes, wax/cream (floor, furniture, shoes) - Polishes, spray (furniture, shoes) (PC23\_1, PC31\_1, PC23\_2, PC31\_2)

***Product (article) characteristics*****Physical form of product:**

Liquid, vapour pressure < 0,5 kPa at STP

**Concentration of substance in product:**

Covers concentrations up to 50 %

***Amount used, frequency and duration of use/exposure*****Frequency:**

Covers exposure up to 1 uses per day

**Frequency:**

Covers exposure up to 29 days per year

***Other conditions affecting consumers exposure***

Indoor use

**Room size:** Covers use in room size of 20 m<sup>3</sup>

**7.3 Exposure estimation and reference to its source**

N/A

**7.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES****Guidance to check compliance with the exposure scenario:**

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## 8. ES 8 Consumer use; Adhesives, sealants (PC1)

### 8.1 TITLE SECTION

|                        |                           |
|------------------------|---------------------------|
| Exposure Scenario name | Lubricants (high release) |
| Date - Version         | 01/07/2019 - 1.0          |
| Life Cycle Stage       | Consumer use              |
| Main user group        | Consumer uses             |
| Sector(s) of use       | Consumer uses (SU21)      |
| Product Categories     | Adhesives, sealants (PC1) |

#### Environment Contributing Scenario

|                      |       |
|----------------------|-------|
| CS1 Waste management | ERC8a |
|----------------------|-------|

#### Consumer Contributing Scenario

|                |     |
|----------------|-----|
| CS2 Lubricants | PC1 |
|----------------|-----|

### 8.2 Conditions of use affecting exposure

#### 8.2. CS1: Environment Contributing Scenario: Waste management (ERC8a)

|                                  |                                                                                                   |
|----------------------------------|---------------------------------------------------------------------------------------------------|
| Environmental release categories | Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a) |
|----------------------------------|---------------------------------------------------------------------------------------------------|

#### 8.2. CS2: Consumer Contributing Scenario: Lubricants (PC1)

|                    |                           |
|--------------------|---------------------------|
| Product Categories | Adhesives, sealants (PC1) |
|--------------------|---------------------------|

#### *Product (article) characteristics*

##### Physical form of product:

Liquid

### 8.3 Exposure estimation and reference to its source

N/A

### 8.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

#### Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## 9. ES 9 Consumer use; Various products (PC39, PC28)

### 9.1 TITLE SECTION

|                        |                                                                        |
|------------------------|------------------------------------------------------------------------|
| Exposure Scenario name | Cosumer other uses                                                     |
| Date - Version         | 01/07/2019 - 1.0                                                       |
| Life Cycle Stage       | Consumer use                                                           |
| Main user group        | Consumer uses                                                          |
| Sector(s) of use       | Consumer uses (SU21)                                                   |
| Product Categories     | Cosmetics, personal care products (PC39) - Perfumes, fragrances (PC28) |

#### Environment Contributing Scenario

|                                   |               |
|-----------------------------------|---------------|
| CS1 Processing of organic liquids | ERC8a - ERC8d |
|-----------------------------------|---------------|

#### Consumer Contributing Scenario

|              |             |
|--------------|-------------|
| CS2 Consumer | PC39 - PC28 |
|--------------|-------------|

### 9.2 Conditions of use affecting exposure

#### 9.2. CS1: Environment Contributing Scenario: Processing of organic liquids (ERC8a, ERC8d)

|                                  |                                                                                                                                                                                                          |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental release categories | Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) -<br>Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8a, ERC8d) |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### 9.2. CS2: Consumer Contributing Scenario: Consumer (PC39, PC28)

|                    |                                                                       |
|--------------------|-----------------------------------------------------------------------|
| Product Categories | Cosmetics, personal care products - Perfumes, fragrances (PC39, PC28) |
|--------------------|-----------------------------------------------------------------------|

#### *Product (article) characteristics*

##### Physical form of product:

Liquid

### 9.3 Exposure estimation and reference to its source

N/A

### 9.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

#### Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

# Exposure Scenario, 29/07/2019

| Substance identity |                            |
|--------------------|----------------------------|
| Chemical name      | idrocarburi dearomatizzati |
| EINECS No.         | 920-107-4                  |

## Table of contents

1. **ES 1** Use at industrial site
2. **ES 2** Use at industrial site
3. **ES 3** Use at industrial site
4. **ES 4** Use at industrial site
5. **ES 5** Widespread use by professional workers
6. **ES 6** Widespread use by professional workers
7. **ES 7** Widespread use by professional workers
8. **ES 8** Widespread use by professional workers
9. **ES 9** Widespread use by professional workers
10. **ES 10** Consumer use; Various products (PC9b, PC9a, PC1, PC4, PC8)
11. **ES 11** Consumer use; Various products (PC9b, PC9a, PC3, PC4, PC8)
12. **ES 12** Consumer use; Various products (PC1, PC24, PC31)
13. **ES 13** Consumer use; Various products (PC1, PC24, PC31)

| 1. ES 1 Use at industrial site                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1.1 TITLE SECTION</b>                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Exposure Scenario name                                                                                                                                  | Use in coatings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Date - Version                                                                                                                                          | 29/07/2019 - 1.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Life Cycle Stage                                                                                                                                        | Use at industrial site                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Main user group                                                                                                                                         | Industrial uses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Sector(s) of use                                                                                                                                        | Industrial uses (SU3)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Environment Contributing Scenario</b>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| CS1 Covered by                                                                                                                                          | ERC4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Worker Contributing Scenario</b>                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| CS2 Industrial                                                                                                                                          | PROC5 - PROC1 - PROC2 - PROC3 - PROC4 - PROC7 - PROC8a - PROC8b - PROC10 - PROC13 - PROC15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>1.2 Conditions of use affecting exposure</b>                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>1.2. CS1: Environment Contributing Scenario: Covered by (ERC4)</b>                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Environmental release categories                                                                                                                        | Use of non-reactive processing aid at industrial site (no inclusion into or onto article) (ERC4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>1.2. CS2: Worker Contributing Scenario: Industrial (PROC5, PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC10, PROC13, PROC15)</b>            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Process Categories                                                                                                                                      | Mixing or blending in batch processes - Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - Chemical production where opportunity for exposure arises - Industrial spraying - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - Transfer of substance or mixture (charging and discharging) at dedicated facilities - Roller application or brushing - Treatment of articles by dipping and pouring - Use as laboratory reagent (PROC5, PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC10, PROC13, PROC15) |
| <b>Product (article) characteristics</b>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Physical form of product:                                                                                                                               | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Concentration of substance in product:                                                                                                                  | Covers percentage substance in the product up to 100 %.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Amount used, frequency and duration of use/exposure</b>                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Duration:                                                                                                                                               | Covers daily exposures up to 8 hours                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>1.3 Exposure estimation and reference to its source</b>                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| N/A                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>1.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES</b>                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Guidance to check compliance with the exposure scenario:</b>                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

## 2. ES 2 Use at industrial site

### 2.1 TITLE SECTION

|                        |                                    |
|------------------------|------------------------------------|
| Exposure Scenario name | Industrial use of laundry products |
| Date - Version         | 29/07/2019 - 1.0                   |
| Life Cycle Stage       | Use at industrial site             |
| Main user group        | Industrial uses                    |
| Sector(s) of use       | Industrial uses (SU3)              |

#### Environment Contributing Scenario

|                |      |
|----------------|------|
| CS1 Covered by | ERC4 |
|----------------|------|

#### Worker Contributing Scenario

|                |                                                                           |
|----------------|---------------------------------------------------------------------------|
| CS2 Industrial | PROC1 - PROC2 - PROC3 - PROC4 - PROC7 - PROC8a - PROC8b - PROC10 - PROC13 |
|----------------|---------------------------------------------------------------------------|

## 2.2 Conditions of use affecting exposure

### 2.2. CS1: Environment Contributing Scenario: Covered by (ERC4)

|                                  |                                                                                                  |
|----------------------------------|--------------------------------------------------------------------------------------------------|
| Environmental release categories | Use of non-reactive processing aid at industrial site (no inclusion into or onto article) (ERC4) |
|----------------------------------|--------------------------------------------------------------------------------------------------|

### 2.2. CS2: Worker Contributing Scenario: Industrial (PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC10, PROC13)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process Categories | Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - Chemical production where opportunity for exposure arises - Industrial spraying - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - Transfer of substance or mixture (charging and discharging) at dedicated facilities - Roller application or brushing - Treatment of articles by dipping and pouring (PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC10, PROC13) |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### Product (article) characteristics

##### Physical form of product:

Liquid

##### Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

## 2.3 Exposure estimation and reference to its source

N/A

## 2.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

### Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

### 3. ES 3 Use at industrial site

#### 3.1 TITLE SECTION

|                        |                             |
|------------------------|-----------------------------|
| Exposure Scenario name | Lubricants - Industrial use |
| Date - Version         | 29/07/2019 - 1.0            |
| Life Cycle Stage       | Use at industrial site      |
| Main user group        | Industrial uses             |
| Sector(s) of use       | Industrial uses (SU3)       |

#### Environment Contributing Scenario

|                |             |
|----------------|-------------|
| CS1 Covered by | ERC4 - ERC7 |
|----------------|-------------|

#### Worker Contributing Scenario

|                |                                                                                                     |
|----------------|-----------------------------------------------------------------------------------------------------|
| CS2 Industrial | PROC1 - PROC2 - PROC3 - PROC4 - PROC7 - PROC8a - PROC8b - PROC9 - PROC10 - PROC13 - PROC17 - PROC18 |
|----------------|-----------------------------------------------------------------------------------------------------|

### 3.2 Conditions of use affecting exposure

#### 3.2. CS1: Environment Contributing Scenario: Covered by (ERC4, ERC7)

|                                  |                                                                                                                                                     |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental release categories | Use of non-reactive processing aid at industrial site (no inclusion into or onto article) - Use of functional fluid at industrial site (ERC4, ERC7) |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|

#### 3.2. CS2: Worker Contributing Scenario: Industrial (PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC17, PROC18)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process Categories | Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - Chemical production where opportunity for exposure arises - Industrial spraying - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - Transfer of substance or mixture (charging and discharging) at dedicated facilities - Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - Roller application or brushing - Treatment of articles by dipping and pouring - Lubrication at high energy conditions in metal working operations - General greasing/lubrication at high kinetic energy conditions (PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC17, PROC18) |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### Product (article) characteristics

##### Physical form of product:

Liquid

##### Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

#### Amount used, frequency and duration of use/exposure

##### Duration:

Covers daily exposures up to 8 hours

### 3.3 Exposure estimation and reference to its source

N/A

### 3.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

**Guidance to check compliance with the exposure scenario:**

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## 4. ES 4 Use at industrial site

### 4.1 TITLE SECTION

|                        |                                     |
|------------------------|-------------------------------------|
| Exposure Scenario name | Metal working fluids / rolling oils |
| Date - Version         | 29/07/2019 - 1.0                    |
| Life Cycle Stage       | Use at industrial site              |
| Main user group        | Industrial uses                     |
| Sector(s) of use       | Industrial uses (SU3)               |

### Environment Contributing Scenario

|                |      |
|----------------|------|
| CS1 Covered by | ERC4 |
|----------------|------|

### Worker Contributing Scenario

|                |                                                                                                    |
|----------------|----------------------------------------------------------------------------------------------------|
| CS2 Industrial | PROC5 - PROC1 - PROC2 - PROC3 - PROC4 - PROC7 - PROC8a - PROC8b - PROC9 - PROC10 - PROC13 - PROC17 |
|----------------|----------------------------------------------------------------------------------------------------|

## 4.2 Conditions of use affecting exposure

### 4.2. CS1: Environment Contributing Scenario: Covered by (ERC4)

|                                  |                                                                                                  |
|----------------------------------|--------------------------------------------------------------------------------------------------|
| Environmental release categories | Use of non-reactive processing aid at industrial site (no inclusion into or onto article) (ERC4) |
|----------------------------------|--------------------------------------------------------------------------------------------------|

### 4.2. CS2: Worker Contributing Scenario: Industrial (PROC5, PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC17)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process Categories | Mixing or blending in batch processes - Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - Chemical production where opportunity for exposure arises - Industrial spraying - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - Transfer of substance or mixture (charging and discharging) at dedicated facilities - Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - Roller application or brushing - Treatment of articles by dipping and pouring - Lubrication at high energy conditions in metal working operations (PROC5, PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC17) |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Product (article) characteristics

|                                        |                                                         |
|----------------------------------------|---------------------------------------------------------|
| Physical form of product:              | Liquid                                                  |
| Concentration of substance in product: | Covers percentage substance in the product up to 100 %. |

### Amount used, frequency and duration of use/exposure

|           |                                      |
|-----------|--------------------------------------|
| Duration: | Covers daily exposures up to 8 hours |
|-----------|--------------------------------------|

## 4.3 Exposure estimation and reference to its source

N/A

## 4.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

**Guidance to check compliance with the exposure scenario:**

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## 5. ES 5 Widespread use by professional workers

### 5.1 TITLE SECTION

|                               |                                        |
|-------------------------------|----------------------------------------|
| <b>Exposure Scenario name</b> | Use in coatings                        |
| <b>Date - Version</b>         | 29/07/2019 - 1.0                       |
| <b>Life Cycle Stage</b>       | Widespread use by professional workers |
| <b>Main user group</b>        | Professional uses                      |
| <b>Sector(s) of use</b>       | Professional uses (SU22)               |

#### Environment Contributing Scenario

|                       |               |
|-----------------------|---------------|
| <b>CS1 Covered by</b> | ERC8a - ERC8d |
|-----------------------|---------------|

#### Worker Contributing Scenario

|                                                    |                                                                                                      |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------|
| <b>CS2 General use from professional operators</b> | PROC5 - PROC1 - PROC2 - PROC3 - PROC4 - PROC8a - PROC8b - PROC10 - PROC11 - PROC13 - PROC15 - PROC19 |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------|

### 5.2 Conditions of use affecting exposure

#### 5.2. CS1: Environment Contributing Scenario: Covered by (ERC8a, ERC8d)

|                                         |                                                                                                                                                                                                       |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Environmental release categories</b> | Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) - Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8a, ERC8d) |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### 5.2. CS2: Worker Contributing Scenario: General use from professional operators (PROC5, PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15, PROC19)

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Process Categories</b> | Mixing or blending in batch processes - Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - Chemical production where opportunity for exposure arises - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - Transfer of substance or mixture (charging and discharging) at dedicated facilities - Roller application or brushing - Non industrial spraying - Treatment of articles by dipping and pouring - Use as laboratory reagent - Manual activities involving hand contact (PROC5, PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15, PROC19) |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### *Product (article) characteristics*

##### **Physical form of product:**

Liquid

##### **Concentration of substance in product:**

Covers percentage substance in the product up to 100 %.

#### *Amount used, frequency and duration of use/exposure*

##### **Duration:**

Covers daily exposures up to 8 hours

### 5.3 Exposure estimation and reference to its source

N/A

### 5.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

**Guidance to check compliance with the exposure scenario:**

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## 6. ES 6 Widespread use by professional workers

### 6.1 TITLE SECTION

|                        |                                        |
|------------------------|----------------------------------------|
| Exposure Scenario name | Laundry products                       |
| Date - Version         | 29/07/2019 - 1.0                       |
| Life Cycle Stage       | Widespread use by professional workers |
| Main user group        | Professional uses                      |
| Sector(s) of use       | Professional uses (SU22)               |

#### Environment Contributing Scenario

|                |               |
|----------------|---------------|
| CS1 Covered by | ERC8a - ERC8d |
|----------------|---------------|

#### Worker Contributing Scenario

|                                             |                                                                                     |
|---------------------------------------------|-------------------------------------------------------------------------------------|
| CS2 General use from professional operators | PROC1 - PROC2 - PROC3 - PROC4 - PROC8a - PROC8b - PROC10 - PROC11 - PROC13 - PROC19 |
|---------------------------------------------|-------------------------------------------------------------------------------------|

### 6.2 Conditions of use affecting exposure

#### 6.2. CS1: Environment Contributing Scenario: Covered by (ERC8a, ERC8d)

|                                  |                                                                                                                                                                                                       |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental release categories | Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) - Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8a, ERC8d) |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### 6.2. CS2: Worker Contributing Scenario: General use from professional operators (PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC19)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process Categories | Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - Chemical production where opportunity for exposure arises - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - Transfer of substance or mixture (charging and discharging) at dedicated facilities - Roller application or brushing - Non industrial spraying - Treatment of articles by dipping and pouring - Manual activities involving hand contact (PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC19) |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### Product (article) characteristics

##### Physical form of product:

Liquid

##### Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

#### Amount used, frequency and duration of use/exposure

##### Duration:

Covers daily exposures up to 8 hours

### 6.3 Exposure estimation and reference to its source

N/A

### 6.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

#### Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least

equivalent levels.

## 7. ES 7 Widespread use by professional workers

### 7.1 TITLE SECTION

|                        |                                        |
|------------------------|----------------------------------------|
| Exposure Scenario name | Lubricants (low release)               |
| Date - Version         | 29/07/2019 - 1.0                       |
| Life Cycle Stage       | Widespread use by professional workers |
| Main user group        | Professional uses                      |
| Sector(s) of use       | Professional uses (SU22)               |

#### Environment Contributing Scenario

|                |               |
|----------------|---------------|
| CS1 Covered by | ERC9a - ERC9b |
|----------------|---------------|

#### Worker Contributing Scenario

|                                             |                                                                                                      |
|---------------------------------------------|------------------------------------------------------------------------------------------------------|
| CS2 General use from professional operators | PROC1 - PROC2 - PROC3 - PROC4 - PROC8a - PROC8b - PROC9 - PROC10 - PROC11 - PROC13 - PROC17 - PROC18 |
|---------------------------------------------|------------------------------------------------------------------------------------------------------|

### 7.2 Conditions of use affecting exposure

#### 7.2. CS1: Environment Contributing Scenario: Covered by (ERC9a, ERC9b)

|                                  |                                                                                                           |
|----------------------------------|-----------------------------------------------------------------------------------------------------------|
| Environmental release categories | Widespread use of functional fluid (indoor) - Widespread use of functional fluid (outdoor) (ERC9a, ERC9b) |
|----------------------------------|-----------------------------------------------------------------------------------------------------------|

#### 7.2. CS2: Worker Contributing Scenario: General use from professional operators (PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC17, PROC18)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process Categories | Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - Chemical production where opportunity for exposure arises - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - Transfer of substance or mixture (charging and discharging) at dedicated facilities - Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - Roller application or brushing - Non industrial spraying - Treatment of articles by dipping and pouring - Lubrication at high energy conditions in metal working operations - General greasing/lubrication at high kinetic energy conditions (PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC17, PROC18) |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### Product (article) characteristics

##### Physical form of product:

Liquid

##### Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

#### Amount used, frequency and duration of use/exposure

##### Duration:

Covers daily exposures up to 8 hours

### 7.3 Exposure estimation and reference to its source

N/A

### 7.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

**Guidance to check compliance with the exposure scenario:**

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## 8. ES 8 Widespread use by professional workers

### 8.1 TITLE SECTION

|                        |                                        |
|------------------------|----------------------------------------|
| Exposure Scenario name | Lubricants (high power)                |
| Date - Version         | 29/07/2019 - 1.0                       |
| Life Cycle Stage       | Widespread use by professional workers |
| Main user group        | Professional uses                      |
| Sector(s) of use       | Professional uses (SU22)               |

#### Environment Contributing Scenario

|                |               |
|----------------|---------------|
| CS1 Covered by | ERC8a - ERC8d |
|----------------|---------------|

#### Worker Contributing Scenario

|                                             |                                                                                                               |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| CS2 General use from professional operators | PROC20 - PROC1 - PROC2 - PROC3 - PROC4 - PROC8a - PROC8b - PROC9 - PROC10 - PROC11 - PROC13 - PROC17 - PROC18 |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------|

### 8.2 Conditions of use affecting exposure

#### 8.2. CS1: Environment Contributing Scenario: Covered by (ERC8a, ERC8d)

|                                  |                                                                                                                                                                                                       |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental release categories | Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) - Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8a, ERC8d) |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### 8.2. CS2: Worker Contributing Scenario: General use from professional operators (PROC20, PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC17, PROC18)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process Categories | Use of functional fluids in small devices - Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - Chemical production where opportunity for exposure arises - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - Transfer of substance or mixture (charging and discharging) at dedicated facilities - Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - Roller application or brushing - Non industrial spraying - Treatment of articles by dipping and pouring - Lubrication at high energy conditions in metal working operations - General greasing/lubrication at high kinetic energy conditions (PROC20, PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC17, PROC18) |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### Product (article) characteristics

|                                        |                                                         |
|----------------------------------------|---------------------------------------------------------|
| Physical form of product:              | Liquid                                                  |
| Concentration of substance in product: | Covers percentage substance in the product up to 100 %. |

#### Amount used, frequency and duration of use/exposure

|           |                                      |
|-----------|--------------------------------------|
| Duration: | Covers daily exposures up to 8 hours |
|-----------|--------------------------------------|

### 8.3 Exposure estimation and reference to its source

N/A

## 8.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

### **Guidance to check compliance with the exposure scenario:**

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## 9. ES 9 Widespread use by professional workers

### 9.1 TITLE SECTION

|                        |                                        |
|------------------------|----------------------------------------|
| Exposure Scenario name | Metal working fluids / rolling oils    |
| Date - Version         | 29/07/2019 - 1.0                       |
| Life Cycle Stage       | Widespread use by professional workers |
| Main user group        | Professional uses                      |
| Sector(s) of use       | Professional uses (SU22)               |

#### Environment Contributing Scenario

|                |               |
|----------------|---------------|
| CS1 Covered by | ERC8a - ERC8d |
|----------------|---------------|

#### Worker Contributing Scenario

|                                             |                                                                                             |
|---------------------------------------------|---------------------------------------------------------------------------------------------|
| CS2 General use from professional operators | PROC5 - PROC1 - PROC2 - PROC3 - PROC8a - PROC8b - PROC9 - PROC10 - PROC11 - PROC13 - PROC17 |
|---------------------------------------------|---------------------------------------------------------------------------------------------|

### 9.2 Conditions of use affecting exposure

#### 9.2. CS1: Environment Contributing Scenario: Covered by (ERC8a, ERC8d)

|                                  |                                                                                                                                                                                                       |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental release categories | Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) - Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8a, ERC8d) |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### 9.2. CS2: Worker Contributing Scenario: General use from professional operators (PROC5, PROC1, PROC2, PROC3, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC17)

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process Categories | Mixing or blending in batch processes - Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - Transfer of substance or mixture (charging and discharging) at dedicated facilities - Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - Roller application or brushing - Non industrial spraying - Treatment of articles by dipping and pouring - Lubrication at high energy conditions in metal working operations (PROC5, PROC1, PROC2, PROC3, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC17) |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### Product (article) characteristics

##### Physical form of product:

Liquid

##### Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

### 9.3 Exposure estimation and reference to its source

N/A

### 9.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

#### Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

|                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10. ES 10 Consumer use; Various products (PC9b, PC9a, PC1, PC4, PC8)                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>10.1 TITLE SECTION</b>                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Exposure Scenario name                                                                                                                                  | Use in coatings                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Date - Version                                                                                                                                          | 29/07/2019 - 1.0                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Life Cycle Stage                                                                                                                                        | Consumer use                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Main user group                                                                                                                                         | Consumer uses                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Sector(s) of use                                                                                                                                        | Consumer uses (SU21)                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Product Categories                                                                                                                                      | Fillers, putties, plasters, modelling clay (PC9b) - Coatings and paints, thinners, paint removers (PC9a) - Adhesives, sealants (PC1) - Anti-freeze and de-icing products (PC4) - Biocidal products (PC8) - Non-metal surface treatment products (PC15) - Ink and toners (PC18) - Leather treatment products (PC23) - Lubricants, greases, release products (PC24) - Polishes and wax blends (PC31) - Textile dyes and impregnating products (PC34) |
| <b>Environment Contributing Scenario</b>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| CS1 Covered by                                                                                                                                          | ERC8a - ERC8d                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Consumer Contributing Scenario</b>                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| CS2 Use in coatings                                                                                                                                     | PC9b - PC9a - PC1 - PC4 - PC8 - PC15 - PC18 - PC23 - PC24 - PC31 - PC34 - PC9c                                                                                                                                                                                                                                                                                                                                                                     |
| <b>10.2 Conditions of use affecting exposure</b>                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>10.2. CS1: Environment Contributing Scenario: Covered by (ERC8a, ERC8d)</b>                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Environmental release categories                                                                                                                        | Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) - Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8a, ERC8d)                                                                                                                                                                                                                                              |
| <b>10.2. CS2: Consumer Contributing Scenario: Use in coatings (PC9b, PC9a, PC1, PC4, PC8, PC15, PC18, PC23, PC24, PC31, PC34)</b>                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Product Categories                                                                                                                                      | Fillers, putties, plasters, modelling clay - Coatings and paints, thinners, paint removers - Adhesives, sealants - Anti-freeze and de-icing products - Biocidal products - Non-metal surface treatment products - Ink and toners - Leather treatment products - Lubricants, greases, release products - Polishes and wax blends - Textile dyes and impregnating products (PC9b, PC9a, PC1, PC4, PC8, PC15, PC18, PC23, PC24, PC31, PC34)           |
| Product (Sub-)Categories                                                                                                                                | Finger paints (PC9c)                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Product (article) characteristics</b>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Physical form of product:                                                                                                                               | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>10.3 Exposure estimation and reference to its source</b>                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| N/A                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>10.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES</b>                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Guidance to check compliance with the exposure scenario:</b>                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

|                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>11. ES 11 Consumer use; Various products (PC9b, PC9a, PC3, PC4, PC8)</b>                                                                             |                                                                                                                                                                                                                                                                                                                                                     |
| <b>11.1 TITLE SECTION</b>                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                     |
| <b>Exposure Scenario name</b>                                                                                                                           | Laundry products                                                                                                                                                                                                                                                                                                                                    |
| <b>Date - Version</b>                                                                                                                                   | 29/07/2019 - 1.0                                                                                                                                                                                                                                                                                                                                    |
| <b>Life Cycle Stage</b>                                                                                                                                 | Consumer use                                                                                                                                                                                                                                                                                                                                        |
| <b>Main user group</b>                                                                                                                                  | Consumer uses                                                                                                                                                                                                                                                                                                                                       |
| <b>Sector(s) of use</b>                                                                                                                                 | Consumer uses (SU21)                                                                                                                                                                                                                                                                                                                                |
| <b>Product Categories</b>                                                                                                                               | Fillers, putties, plasters, modelling clay (PC9b) - Coatings and paints, thinners, paint removers (PC9a) - Air care products (PC3) - Anti-freeze and de-icing products (PC4) - Biocidal products (PC8) - Lubricants, greases, release products (PC24) - Washing and cleaning products (PC35) - Welding and soldering products, flux products (PC38) |
| <b>Environment Contributing Scenario</b>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                     |
| <b>CS1 Covered by</b>                                                                                                                                   | ERC8a - ERC8d                                                                                                                                                                                                                                                                                                                                       |
| <b>Consumer Contributing Scenario</b>                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                     |
| <b>CS2 Laundry products</b>                                                                                                                             | PC9b - PC9a - PC3 - PC4 - PC8 - PC24 - PC35 - PC38 - PC9c                                                                                                                                                                                                                                                                                           |
| <b>11.2 Conditions of use affecting exposure</b>                                                                                                        |                                                                                                                                                                                                                                                                                                                                                     |
| <b>11.2. CS1: Environment Contributing Scenario: Covered by (ERC8a, ERC8d)</b>                                                                          |                                                                                                                                                                                                                                                                                                                                                     |
| <b>Environmental release categories</b>                                                                                                                 | Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) - Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8a, ERC8d)                                                                                                                                               |
| <b>11.2. CS2: Consumer Contributing Scenario: Laundry products (PC9b, PC9a, PC3, PC4, PC8, PC24, PC35, PC38)</b>                                        |                                                                                                                                                                                                                                                                                                                                                     |
| <b>Product Categories</b>                                                                                                                               | Fillers, putties, plasters, modelling clay - Coatings and paints, thinners, paint removers - Air care products - Anti-freeze and de-icing products - Biocidal products - Lubricants, greases, release products - Washing and cleaning products - Welding and soldering products, flux products (PC9b, PC9a, PC3, PC4, PC8, PC24, PC35, PC38)        |
| <b>Product (Sub-)Categories</b>                                                                                                                         | Finger paints (PC9c)                                                                                                                                                                                                                                                                                                                                |
| <b><i>Product (article) characteristics</i></b>                                                                                                         |                                                                                                                                                                                                                                                                                                                                                     |
| <b>Physical form of product:</b>                                                                                                                        | Liquid                                                                                                                                                                                                                                                                                                                                              |
| <b>11.3 Exposure estimation and reference to its source</b>                                                                                             |                                                                                                                                                                                                                                                                                                                                                     |
| N/A                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                     |
| <b>11.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES</b>                                                             |                                                                                                                                                                                                                                                                                                                                                     |
| <b>Guidance to check compliance with the exposure scenario:</b>                                                                                         |                                                                                                                                                                                                                                                                                                                                                     |
| Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |                                                                                                                                                                                                                                                                                                                                                     |

## 12. ES 12 Consumer use; Various products (PC1, PC24, PC31)

### 12.1 TITLE SECTION

|                        |                                                                                                           |
|------------------------|-----------------------------------------------------------------------------------------------------------|
| Exposure Scenario name | Lubricants (low release)                                                                                  |
| Date - Version         | 29/07/2019 - 1.0                                                                                          |
| Life Cycle Stage       | Consumer use                                                                                              |
| Main user group        | Consumer uses                                                                                             |
| Sector(s) of use       | Consumer uses (SU21)                                                                                      |
| Product Categories     | Adhesives, sealants (PC1) - Lubricants, greases, release products (PC24) - Polishes and wax blends (PC31) |

#### Environment Contributing Scenario

|                |               |
|----------------|---------------|
| CS1 Covered by | ERC9a - ERC9b |
|----------------|---------------|

#### Consumer Contributing Scenario

|                |                   |
|----------------|-------------------|
| CS2 Lubricants | PC1 - PC24 - PC31 |
|----------------|-------------------|

## 12.2 Conditions of use affecting exposure

### 12.2. CS1: Environment Contributing Scenario: Covered by (ERC9a, ERC9b)

|                                  |                                                                                                           |
|----------------------------------|-----------------------------------------------------------------------------------------------------------|
| Environmental release categories | Widespread use of functional fluid (indoor) - Widespread use of functional fluid (outdoor) (ERC9a, ERC9b) |
|----------------------------------|-----------------------------------------------------------------------------------------------------------|

### 12.2. CS2: Consumer Contributing Scenario: Lubricants (PC1, PC24, PC31)

|                    |                                                                                                         |
|--------------------|---------------------------------------------------------------------------------------------------------|
| Product Categories | Adhesives, sealants - Lubricants, greases, release products - Polishes and wax blends (PC1, PC24, PC31) |
|--------------------|---------------------------------------------------------------------------------------------------------|

#### *Product (article) characteristics*

##### Physical form of product:

Liquid

## 12.3 Exposure estimation and reference to its source

N/A

## 12.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

### Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## 13. ES 13 Consumer use; Various products (PC1, PC24, PC31)

### 13.1 TITLE SECTION

|                        |                                                                                                           |
|------------------------|-----------------------------------------------------------------------------------------------------------|
| Exposure Scenario name | Lubricants (high release)                                                                                 |
| Date - Version         | 29/07/2019 - 1.0                                                                                          |
| Life Cycle Stage       | Consumer use                                                                                              |
| Main user group        | Consumer uses                                                                                             |
| Sector(s) of use       | Consumer uses (SU21)                                                                                      |
| Product Categories     | Adhesives, sealants (PC1) - Lubricants, greases, release products (PC24) - Polishes and wax blends (PC31) |

#### Environment Contributing Scenario

|                |               |
|----------------|---------------|
| CS1 Covered by | ERC8a - ERC8d |
|----------------|---------------|

#### Consumer Contributing Scenario

|                |                   |
|----------------|-------------------|
| CS2 Lubricants | PC1 - PC24 - PC31 |
|----------------|-------------------|

### 13.2 Conditions of use affecting exposure

#### 13.2. CS1: Environment Contributing Scenario: Covered by (ERC8a, ERC8d)

|                                  |                                                                                                                                                                                                       |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental release categories | Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) - Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8a, ERC8d) |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### 13.2. CS2: Consumer Contributing Scenario: Lubricants (PC1, PC24, PC31)

|                    |                                                                                                         |
|--------------------|---------------------------------------------------------------------------------------------------------|
| Product Categories | Adhesives, sealants - Lubricants, greases, release products - Polishes and wax blends (PC1, PC24, PC31) |
|--------------------|---------------------------------------------------------------------------------------------------------|

### 13.3 Exposure estimation and reference to its source

N/A

### 13.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

#### Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## Exposure Scenario, 10/07/2019

| Substance identity |               |
|--------------------|---------------|
| Chemical name      | 2-Aminoetanol |
| CAS No.            | 141-43-5      |
| EINECS No.         | 205-483-3     |

### Table of contents

1. **ES 1** Consumer use; Washing and cleaning products (PC35)
2. **ES 2** Widespread use by professional workers; Washing and cleaning products (PC35)
3. **ES 3** Use at industrial site; Polymer preparations and compounds (PC32)

| 1. ES 1 Consumer use; Washing and cleaning products (PC35)                                                                                                                                       |                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| 1.1 TITLE SECTION                                                                                                                                                                                |                                                                                                    |
| Exposure Scenario name                                                                                                                                                                           | Consumer goods                                                                                     |
| Date - Version                                                                                                                                                                                   | 10/07/2019 - 1.0                                                                                   |
| Life Cycle Stage                                                                                                                                                                                 | Consumer use                                                                                       |
| Main user group                                                                                                                                                                                  | Consumer uses                                                                                      |
| Sector(s) of use                                                                                                                                                                                 | Consumer uses (SU21)                                                                               |
| Product Categories                                                                                                                                                                               | Washing and cleaning products (PC35)                                                               |
| Environment Contributing Scenario                                                                                                                                                                |                                                                                                    |
| CS1 Water-based process                                                                                                                                                                          | ERC8d                                                                                              |
| Consumer Contributing Scenario                                                                                                                                                                   |                                                                                                    |
| CS2 Detergent liquids                                                                                                                                                                            | PC35                                                                                               |
| 1.2 Conditions of use affecting exposure                                                                                                                                                         |                                                                                                    |
| 1.2. CS1: Environment Contributing Scenario: Water-based process (ERC8d)                                                                                                                         |                                                                                                    |
| Environmental release categories                                                                                                                                                                 | Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d) |
| <i>Amount used, frequency and duration of use (or from service life)</i>                                                                                                                         |                                                                                                    |
| <b>Amounts used:</b><br>Annual amount per site 60000000 kg                                                                                                                                       |                                                                                                    |
| <b>Release type:</b> Continuous release                                                                                                                                                          |                                                                                                    |
| <b>Emission days:</b> 365 days per year                                                                                                                                                          |                                                                                                    |
| <i>Conditions and measures related to treatment of waste (including article waste)</i>                                                                                                           |                                                                                                    |
| <b>Waste treatment</b>                                                                                                                                                                           |                                                                                                    |
| Contain and dispose of waste according to local regulations.                                                                                                                                     | Waste - minimum efficiency of: 87 %                                                                |
| <i>Other conditions affecting environmental exposure</i>                                                                                                                                         |                                                                                                    |
| <b>Local marine water dilution factor:</b> 100<br><b>Local freshwater dilution factor:</b> 10<br><b>Receiving surface water flow:</b> 18000 m <sup>3</sup> /day<br>Covers indoor and outdoor use |                                                                                                    |
| 1.2. CS2: Consumer Contributing Scenario: Detergent liquids (PC35)                                                                                                                               |                                                                                                    |
| Product Categories                                                                                                                                                                               | Washing and cleaning products (PC35)                                                               |
| <i>Product (article) characteristics</i>                                                                                                                                                         |                                                                                                    |
| <b>Vapour pressure:</b><br>0.539 hPa                                                                                                                                                             |                                                                                                    |
| <b>Concentration of substance in product:</b><br>Covers concentrations up to 5 %                                                                                                                 |                                                                                                    |
| <i>Amount used, frequency and duration of use/exposure</i>                                                                                                                                       |                                                                                                    |
| <b>Duration:</b><br>Application duration 0.3 min                                                                                                                                                 |                                                                                                    |

**Frequency:**

Covers exposure up to 365 days per year

**Duration:**

Exposure duration 0.75 min

**Information and behavioural advice for consumers****Information and behavioural advice for consumers:**

Avoid contact with eyes

**Other conditions affecting consumers exposure****Room size:** Covers use in room size of 1 m<sup>3</sup>**Ventilation rate:** Covers use under typical household ventilation.**Body parts exposed:**

Palm of one hand Hands and forearms

**1.3 Exposure estimation and reference to its source****1.3. CS1: Environment Contributing Scenario: Water-based process (ERC8d)**

| protection target | Exposure level | Calculation method          | Risk Characterization Ratio (RCR) |
|-------------------|----------------|-----------------------------|-----------------------------------|
| freshwater        | 9.6 kg/d       | ECETOC TRA environment v2.0 | 0.514                             |

**1.2. CS2: Consumer Contributing Scenario: Detergent liquids (PC35)**

| Exposure route, Health effect, Exposure indicator | Exposure level         | Calculation method | Risk Characterization Ratio (RCR) |
|---------------------------------------------------|------------------------|--------------------|-----------------------------------|
| inhalative, systemic, long-term                   | 0.01 mg/m <sup>3</sup> | N/A                | 0.01                              |
| inhalative, systemic, short-term                  | 0.01 mg/m <sup>3</sup> | N/A                | 0.01                              |
| dermal, systemic, long-term                       | 0.008 mg/kg KW         | N/A                | 0.03                              |
| dermal, systemic, long-term                       | 0.002 mg/kg KW         | N/A                | 0.01                              |
| oral, systemic, long-term                         | 0.002 mg/kg KW         | N/A                | 0.01                              |

**1.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES****Guidance to check compliance with the exposure scenario:**

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## 2. ES 2 Widespread use by professional workers; Washing and cleaning products (PC35)

### 2.1 TITLE SECTION

|                        |                                        |
|------------------------|----------------------------------------|
| Exposure Scenario name | Cleaning agent                         |
| Date - Version         | 10/07/2019 - 1.0                       |
| Life Cycle Stage       | Widespread use by professional workers |
| Main user group        | Professional uses                      |
| Sector(s) of use       | Professional uses (SU22)               |
| Product Categories     | Washing and cleaning products (PC35)   |

#### Environment Contributing Scenario

|                         |       |
|-------------------------|-------|
| CS1 Water-based process | ERC8d |
|-------------------------|-------|

#### Worker Contributing Scenario

|              |                |
|--------------|----------------|
| CS2 Cleaning | PROC3          |
| CS3 Cleaning | PROC8a         |
| CS4 Cleaning | PROC10         |
| CS5 Cleaning | PROC7 - PROC11 |
| CS6 Cleaning | PROC13         |
| CS7 Cleaning | PROC19         |

### 2.2 Conditions of use affecting exposure

#### 2.2. CS1: Environment Contributing Scenario: Water-based process (ERC8d)

|                                  |                                                                                                    |
|----------------------------------|----------------------------------------------------------------------------------------------------|
| Environmental release categories | Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d) |
|----------------------------------|----------------------------------------------------------------------------------------------------|

#### *Product (article) characteristics*

##### Physical form of product:

Liquid

##### Concentration of substance in product:

Covers concentrations up to 10 %

#### *Amount used, frequency and duration of use (or from service life)*

##### Amounts used:

Annual amount per site 65000000 kg

##### Release type: Continuous release

##### Emission days: 220 days per year

#### *Conditions and measures related to sewage treatment plant*

##### STP type:

Municipal Sewage Treatment Plant

Water - minimum efficiency of: = 87 %

##### Additional information on STP:

Acclimated biological treatment

##### STP sludge treatment:

|                                                                                                                                                                                                 |                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>STP effluent (m<sup>3</sup>/day):</b> 2300                                                                                                                                                   |                                                                                                                                                                              |
| <i>Conditions and measures related to treatment of waste (including article waste)</i>                                                                                                          |                                                                                                                                                                              |
| <b>Waste treatment</b><br>Product residual disposal complies with applicable regulations.                                                                                                       |                                                                                                                                                                              |
| <i>Other conditions affecting environmental exposure</i>                                                                                                                                        |                                                                                                                                                                              |
| <b>Local marine water dilution factor:</b> 100<br><b>Local freshwater dilution factor:</b> 10<br><b>Receiving surface water flow:</b> 1800 m <sup>3</sup> /day<br>Covers indoor and outdoor use |                                                                                                                                                                              |
| <b>2.2. CS2: Worker Contributing Scenario: Cleaning (PROC3)</b>                                                                                                                                 |                                                                                                                                                                              |
| <b>Process Categories</b>                                                                                                                                                                       | Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3) |
| <i>Product (article) characteristics</i>                                                                                                                                                        |                                                                                                                                                                              |
| <b>Physical form of product:</b><br>Liquid<br><br><b>Vapour pressure:</b><br>0.539 hPa<br><br><b>Concentration of substance in product:</b><br>Covers concentrations up to 10 %                 |                                                                                                                                                                              |
| <i>Amount used, frequency and duration of use/exposure</i>                                                                                                                                      |                                                                                                                                                                              |
| <b>Duration:</b><br>Covers daily exposures up to 8 hours<br><b>Frequency:</b><br>Covers use up to 240 days per year                                                                             |                                                                                                                                                                              |
| <i>Technical and organisational conditions and measures</i>                                                                                                                                     |                                                                                                                                                                              |
| <b>Technical and organisational measures</b><br>Ensure that direct skin contact is avoided.                                                                                                     |                                                                                                                                                                              |
| <i>Conditions and measures related to personal protection, hygiene and health evaluation</i>                                                                                                    |                                                                                                                                                                              |
| <b>Personal protection</b>                                                                                                                                                                      |                                                                                                                                                                              |
| Wear suitable gloves tested to EN374.                                                                                                                                                           | Dermal - minimum efficiency of: 98 %                                                                                                                                         |
| Wear suitable respiratory protection.                                                                                                                                                           | Dermal - minimum efficiency of: 90 %                                                                                                                                         |
| Use suitable eye protection.                                                                                                                                                                    |                                                                                                                                                                              |
| <i>Other conditions affecting worker exposure</i>                                                                                                                                               |                                                                                                                                                                              |
| Indoor use                                                                                                                                                                                      |                                                                                                                                                                              |
| <b>Ventilation rate:</b> Provide forced ventilation 80 %                                                                                                                                        |                                                                                                                                                                              |
| <i>Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.</i>                                                                                           |                                                                                                                                                                              |
| <b>Additional Good Practice Advice:</b><br>Ensure regular inspection, cleaning and maintenance of equipment and machines.                                                                       |                                                                                                                                                                              |
| <b>2.2. CS3: Worker Contributing Scenario: Cleaning (PROC8a)</b>                                                                                                                                |                                                                                                                                                                              |
| <b>Process Categories</b>                                                                                                                                                                       | Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a)                                                                             |
| <i>Product (article) characteristics</i>                                                                                                                                                        |                                                                                                                                                                              |
| <b>Physical form of product:</b><br>Liquid                                                                                                                                                      |                                                                                                                                                                              |

**Vapour pressure:**

0.539 hPa

**Concentration of substance in product:**

Covers concentrations up to 10 %

*Amount used, frequency and duration of use/exposure***Duration:**

Covers daily exposures up to 8 hours

**Frequency:**

Covers use up to 240 days per year

*Technical and organisational conditions and measures***Technical and organisational measures**

Ensure that direct skin contact is avoided.

*Conditions and measures related to personal protection, hygiene and health evaluation***Personal protection**

|                                       |                                      |
|---------------------------------------|--------------------------------------|
| Wear suitable gloves tested to EN374. | Dermal - minimum efficiency of: 98 % |
| Wear suitable respiratory protection. | Dermal - minimum efficiency of: 90 % |
| Use suitable eye protection.          |                                      |

*Other conditions affecting worker exposure*

Indoor use

**Ventilation rate:** Provide forced ventilation 80 %*Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.***Additional Good Practice Advice:**

Ensure regular inspection, cleaning and maintenance of equipment and machines.

**2.2. CS4: Worker Contributing Scenario: Cleaning (PROC10)**

|                           |                                         |
|---------------------------|-----------------------------------------|
| <b>Process Categories</b> | Roller application or brushing (PROC10) |
|---------------------------|-----------------------------------------|

*Product (article) characteristics***Physical form of product:**

Liquid

**Vapour pressure:**

0.539 hPa

**Concentration of substance in product:**

Covers concentrations up to 10 %

*Amount used, frequency and duration of use/exposure***Duration:**

Covers daily exposures up to 8 hours

**Frequency:**

Covers use up to 240 days per year

*Technical and organisational conditions and measures***Technical and organisational measures**

Ensure that direct skin contact is avoided.

*Conditions and measures related to personal protection, hygiene and health evaluation*

## Personal protection

|                                       |                                      |
|---------------------------------------|--------------------------------------|
| Wear suitable gloves tested to EN374. | Dermal - minimum efficiency of: 98 % |
| Wear suitable respiratory protection. | Dermal - minimum efficiency of: 90 % |
| Use suitable eye protection.          |                                      |

## Other conditions affecting worker exposure

Indoor use

**Ventilation rate:** Provide forced ventilation 80 %

*Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.*

### Additional Good Practice Advice:

Ensure regular inspection, cleaning and maintenance of equipment and machines.

## 2.2. CS5: Worker Contributing Scenario: Cleaning (PROC7, PROC11)

|                    |                                                               |
|--------------------|---------------------------------------------------------------|
| Process Categories | Industrial spraying - Non industrial spraying (PROC7, PROC11) |
|--------------------|---------------------------------------------------------------|

## Product (article) characteristics

### Physical form of product:

Liquid

### Vapour pressure:

0.539 hPa

### Concentration of substance in product:

Covers concentrations up to 10 %

## Amount used, frequency and duration of use/exposure

### Duration:

Covers daily exposures up to 8 hours

### Frequency:

Covers use up to 240 days per year

## Technical and organisational conditions and measures

### Technical and organisational measures

Ensure that direct skin contact is avoided.

## Conditions and measures related to personal protection, hygiene and health evaluation

## Personal protection

|                                       |                                      |
|---------------------------------------|--------------------------------------|
| Wear suitable gloves tested to EN374. | Dermal - minimum efficiency of: 98 % |
| Wear suitable respiratory protection. | Dermal - minimum efficiency of: 90 % |
| Use suitable eye protection.          |                                      |

## Other conditions affecting worker exposure

Indoor use

**Ventilation rate:** Provide forced ventilation 80 %

*Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.*

### Additional Good Practice Advice:

Ensure regular inspection, cleaning and maintenance of equipment and machines.

## 2.2. CS6: Worker Contributing Scenario: Cleaning (PROC13)

|                                                                                                                           |                                                       |                                      |  |
|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|--------------------------------------|--|
| <b>Process Categories</b>                                                                                                 | Treatment of articles by dipping and pouring (PROC13) |                                      |  |
| <i>Product (article) characteristics</i>                                                                                  |                                                       |                                      |  |
| <b>Physical form of product:</b><br>Liquid                                                                                |                                                       |                                      |  |
| <b>Vapour pressure:</b><br>0.539 hPa                                                                                      |                                                       |                                      |  |
| <b>Concentration of substance in product:</b><br>Covers concentrations up to 10 %                                         |                                                       |                                      |  |
| <i>Amount used, frequency and duration of use/exposure</i>                                                                |                                                       |                                      |  |
| <b>Duration:</b><br>Covers daily exposures up to 8 hours                                                                  |                                                       |                                      |  |
| <b>Frequency:</b><br>Covers use up to 240 days per year                                                                   |                                                       |                                      |  |
| <i>Technical and organisational conditions and measures</i>                                                               |                                                       |                                      |  |
| <b>Technical and organisational measures</b><br>Ensure that direct skin contact is avoided.                               |                                                       |                                      |  |
| <i>Conditions and measures related to personal protection, hygiene and health evaluation</i>                              |                                                       |                                      |  |
| <b>Personal protection</b>                                                                                                |                                                       |                                      |  |
| Wear suitable gloves tested to EN374.                                                                                     |                                                       | Dermal - minimum efficiency of: 98 % |  |
| Wear suitable respiratory protection.                                                                                     |                                                       | Dermal - minimum efficiency of: 90 % |  |
| Use suitable eye protection.                                                                                              |                                                       |                                      |  |
| <i>Other conditions affecting worker exposure</i>                                                                         |                                                       |                                      |  |
| Indoor use                                                                                                                |                                                       |                                      |  |
| <b>Ventilation rate:</b> Provide forced ventilation 80 %                                                                  |                                                       |                                      |  |
| <i>Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.</i>                     |                                                       |                                      |  |
| <b>Additional Good Practice Advice:</b><br>Ensure regular inspection, cleaning and maintenance of equipment and machines. |                                                       |                                      |  |
| <b>2.2. CS7: Worker Contributing Scenario: Cleaning (PROC19)</b>                                                          |                                                       |                                      |  |
| <b>Process Categories</b>                                                                                                 | Manual activities involving hand contact (PROC19)     |                                      |  |
| <i>Product (article) characteristics</i>                                                                                  |                                                       |                                      |  |
| <b>Physical form of product:</b><br>Liquid                                                                                |                                                       |                                      |  |
| <b>Vapour pressure:</b><br>0.539 hPa                                                                                      |                                                       |                                      |  |
| <b>Concentration of substance in product:</b><br>Covers concentrations up to 10 %                                         |                                                       |                                      |  |
| <i>Amount used, frequency and duration of use/exposure</i>                                                                |                                                       |                                      |  |
| <b>Duration:</b><br>Covers daily exposures up to 8 hours                                                                  |                                                       |                                      |  |
| <b>Frequency:</b><br>Covers use up to 240 days per year                                                                   |                                                       |                                      |  |
| <i>Technical and organisational conditions and measures</i>                                                               |                                                       |                                      |  |

## Technical and organisational measures

Ensure that direct skin contact is avoided.

## Conditions and measures related to personal protection, hygiene and health evaluation

### Personal protection

|                                       |                                      |
|---------------------------------------|--------------------------------------|
| Wear suitable gloves tested to EN374. | Dermal - minimum efficiency of: 98 % |
| Wear suitable respiratory protection. | Dermal - minimum efficiency of: 90 % |
| Use suitable eye protection.          |                                      |

### Other conditions affecting worker exposure

Indoor use

**Ventilation rate:** Provide forced ventilation 80 %

*Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.*

### Additional Good Practice Advice:

Ensure regular inspection, cleaning and maintenance of equipment and machines.

## 2.3 Exposure estimation and reference to its source

### 2.3. CS1: Environment Contributing Scenario: Water-based process (ERC8d)

| protection target | Exposure level | Calculation method          | Risk Characterization Ratio (RCR) |
|-------------------|----------------|-----------------------------|-----------------------------------|
| freshwater        | 9343 kg/d      | ECETOC TRA environment v2.0 | 0.482                             |

### 2.3. CS2: Worker Contributing Scenario: Cleaning (PROC3)

| Exposure route, Health effect, Exposure indicator | Exposure level         | Calculation method     | Risk Characterization Ratio (RCR) |
|---------------------------------------------------|------------------------|------------------------|-----------------------------------|
| dermal, systemic, long-term                       | 0.01 mg/kg KW          | ECETOC TRA worker v2.0 | 0.01                              |
| inhalative, systemic, long-term                   | 0.15 mg/m <sup>3</sup> | ECETOC TRA worker v2.0 | 0.05                              |
| inhalative, systemic, short-term                  | 0.15 mg/m <sup>3</sup> | ECETOC TRA worker v2.0 | 0.05                              |

### 2.3. CS3: Worker Contributing Scenario: Cleaning (PROC8a)

| Exposure route, Health effect, Exposure indicator | Exposure level         | Calculation method     | Risk Characterization Ratio (RCR) |
|---------------------------------------------------|------------------------|------------------------|-----------------------------------|
| dermal, systemic, long-term                       | 0.03 mg/kg KW          | ECETOC TRA worker v2.0 | 0.03                              |
| inhalative, systemic, long-term                   | 1.27 mg/m <sup>3</sup> | ECETOC TRA worker v2.0 | 0.39                              |

### 2.3. CS4: Worker Contributing Scenario: Cleaning (PROC10)

| Exposure route, Health effect, Exposure indicator | Exposure level | Calculation method     | Risk Characterization Ratio (RCR) |
|---------------------------------------------------|----------------|------------------------|-----------------------------------|
| dermal, systemic, long-term                       | 0.05 mg/kg KW  | ECETOC TRA worker v2.0 | 0.05                              |

|                                 |                        |                        |      |
|---------------------------------|------------------------|------------------------|------|
| inhalative, systemic, long-term | 0.76 mg/m <sup>3</sup> | ECETOC TRA worker v2.0 | 0.23 |
|---------------------------------|------------------------|------------------------|------|

### 2.3. CS5: Worker Contributing Scenario: Cleaning (PROC7, PROC11)

| Exposure route, Health effect, Exposure indicator | Exposure level         | Calculation method     | Risk Characterization Ratio (RCR) |
|---------------------------------------------------|------------------------|------------------------|-----------------------------------|
| dermal, systemic, long-term                       | 0.21 mg/kg KW          | ECETOC TRA worker v2.0 | 0.21                              |
| inhalative, systemic, long-term                   | 1.53 mg/m <sup>3</sup> | ECETOC TRA worker v2.0 | 0.46                              |

### 2.3. CS6: Worker Contributing Scenario: Cleaning (PROC13)

| Exposure route, Health effect, Exposure indicator | Exposure level         | Calculation method     | Risk Characterization Ratio (RCR) |
|---------------------------------------------------|------------------------|------------------------|-----------------------------------|
| dermal, systemic, long-term                       | 0.03 mg/kg KW          | ECETOC TRA worker v2.0 | 0.03                              |
| inhalative, systemic, long-term                   | 0.25 mg/m <sup>3</sup> | ECETOC TRA worker v2.0 | 0.08                              |

### 2.3. CS7: Worker Contributing Scenario: Cleaning (PROC19)

| Exposure route, Health effect, Exposure indicator | Exposure level         | Calculation method     | Risk Characterization Ratio (RCR) |
|---------------------------------------------------|------------------------|------------------------|-----------------------------------|
| dermal, systemic, long-term                       | 0.28 mg/kg KW          | ECETOC TRA worker v2.0 | 0.28                              |
| inhalative, systemic, long-term                   | 0.38 mg/m <sup>3</sup> | ECETOC TRA worker v2.0 | 0.12                              |

## 2.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

### Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## 3. ES 3

## Use at industrial site; Polymer preparations and compounds (PC32)

## 3.1 TITLE SECTION

|                        |                                           |
|------------------------|-------------------------------------------|
| Exposure Scenario name | Additive                                  |
| Date - Version         | 10/07/2019 - 1.0                          |
| Life Cycle Stage       | Use at industrial site                    |
| Main user group        | Industrial uses                           |
| Product Categories     | Polymer preparations and compounds (PC32) |

## Environment Contributing Scenario

|                           |      |
|---------------------------|------|
| CS1 Solvent-based process | ERC5 |
|---------------------------|------|

## Worker Contributing Scenario

|              |        |
|--------------|--------|
| CS2 Additive | PROC14 |
|--------------|--------|

## 3.2 Conditions of use affecting exposure

## 3.2. CS1: Environment Contributing Scenario: Solvent-based process (ERC5)

|                                  |                                                                      |
|----------------------------------|----------------------------------------------------------------------|
| Environmental release categories | Use at industrial site leading to inclusion into/onto article (ERC5) |
|----------------------------------|----------------------------------------------------------------------|

*Product (article) characteristics***Concentration of substance in product:**

Covers percentage substance in the product up to 100 %.

*Amount used, frequency and duration of use (or from service life)***Amounts used:**

Annual amount per site 6720000 kg

**Release type:** Continuous release**Emission days:** 365 days per year*Conditions and measures related to sewage treatment plant***STP type:**

Municipal Sewage Treatment Plant

Water - minimum efficiency of: = 87 %

**Additional information on STP:**

Biological elimination

**STP sludge treatment:**

No application of sewage sludge to soil

**STP effluent (m<sup>3</sup>/day):** 2300*Conditions and measures related to treatment of waste (including article waste)***Waste treatment**

Do not apply industrial sludge to natural soils.

*Other conditions affecting environmental exposure***Local marine water dilution factor:** 100**Local freshwater dilution factor:** 10**Receiving surface water flow:** 18000 m<sup>3</sup>/day

## 3.2. CS2: Worker Contributing Scenario: Additive (PROC14)

|                                                                                                                                                                                                                            |                                                                         |                                          |                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|------------------------------------------|------------------------------------------|
| <b>Process Categories</b>                                                                                                                                                                                                  | Tabletting, compression, extrusion, pelletisation, granulation (PROC14) |                                          |                                          |
| <b>Product (article) characteristics</b>                                                                                                                                                                                   |                                                                         |                                          |                                          |
| <b>Physical form of product:</b><br>Liquid                                                                                                                                                                                 |                                                                         |                                          |                                          |
| <b>Vapour pressure:</b><br>0.539 hPa                                                                                                                                                                                       |                                                                         |                                          |                                          |
| <b>Concentration of substance in product:</b><br>Covers percentage substance in the product up to 100 %.                                                                                                                   |                                                                         |                                          |                                          |
| <b>Amount used, frequency and duration of use/exposure</b>                                                                                                                                                                 |                                                                         |                                          |                                          |
| <b>Duration:</b><br>Covers use up to 480 min                                                                                                                                                                               |                                                                         |                                          |                                          |
| <b>Frequency:</b><br>Covers frequency up to: 240 days per year                                                                                                                                                             |                                                                         |                                          |                                          |
| <b>Conditions and measures related to personal protection, hygiene and health evaluation</b>                                                                                                                               |                                                                         |                                          |                                          |
| <b>Personal protection</b>                                                                                                                                                                                                 |                                                                         |                                          |                                          |
| Use suitable eye protection.                                                                                                                                                                                               |                                                                         |                                          |                                          |
| Wear suitable gloves tested to EN374.                                                                                                                                                                                      |                                                                         | Inhalation - minimum efficiency of: 90 % |                                          |
| <b>Other conditions affecting worker exposure</b>                                                                                                                                                                          |                                                                         |                                          |                                          |
| Indoor use                                                                                                                                                                                                                 |                                                                         |                                          |                                          |
| <b>Ventilation rate:</b> Provide forced ventilation 90 %                                                                                                                                                                   |                                                                         |                                          |                                          |
| <b>3.3 Exposure estimation and reference to its source</b>                                                                                                                                                                 |                                                                         |                                          |                                          |
| <b>3.3. CS1: Environment Contributing Scenario: Solvent-based process (ERC5)</b>                                                                                                                                           |                                                                         |                                          |                                          |
| <b>protection target</b>                                                                                                                                                                                                   | <b>Exposure level</b>                                                   | <b>Calculation method</b>                | <b>Risk Characterization Ratio (RCR)</b> |
| freshwater                                                                                                                                                                                                                 | 6.28 kg/d                                                               | N/A                                      | N/A                                      |
| <b>3.3. CS2: Worker Contributing Scenario: Additive (PROC14)</b>                                                                                                                                                           |                                                                         |                                          |                                          |
| <b>Exposure route, Health effect, Exposure indicator</b>                                                                                                                                                                   | <b>Exposure level</b>                                                   | <b>Calculation method</b>                | <b>Risk Characterization Ratio (RCR)</b> |
| dermal, systemic, long-term                                                                                                                                                                                                | 0.07 mg/kg bw/day                                                       | ECETOC TRA worker v3                     | 0.07                                     |
| inhalative, systemic, long-term                                                                                                                                                                                            | 1.27 mg/m <sup>3</sup>                                                  | ECETOC TRA worker v3                     | 0.39                                     |
| inhalative, local, long-term                                                                                                                                                                                               | 1.27 mg/m <sup>3</sup>                                                  | ECETOC TRA worker v3                     | 0.39                                     |
| <b>3.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES</b>                                                                                                                                 |                                                                         |                                          |                                          |
| <b>Guidance to check compliance with the exposure scenario:</b><br>Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |                                                                         |                                          |                                          |