

Ficha de datos de seguridad BRAKES AND METAL CLEANER



Ficha de datos de seguridad del 5/9/2023, Revisión 14

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: BRAKES AND METAL CLEANER

Código comercial: 31041E

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

Uso recomendado:

LIMPIADOR DE FRENOS, CADENAS Y METALES

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):

⚠ Peligro, Aerosols 1, Aerosol extremadamente inflamable. Recipiente a presión: Puede reventar si se calienta.

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

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

⚠ Atención, STOT SE 3, Puede provocar somnolencia o vértigo.

⚠ Aquatic Chronic 2, Tóxico para los organismos acuáticos, con efectos nocivos duraderos.

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

2.2. Elementos de la etiqueta

Pictogramas de peligro:



Peligro

Indicaciones de peligro:

H222, H229 Aerosol extremadamente inflamable. Recipiente a presión: Puede reventar si se calienta.

H315 Provoca irritación cutánea.

H319 Provoca irritación ocular grave.

H336 Puede provocar somnolencia o vértigo.

H411 Tóxico para los organismos acuáticos, con efectos nocivos duraderos.

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.

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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.
 P211 No pulverizar sobre una llama abierta u otra fuente de ignición.
 P251 No perforar ni quemar, incluso después de su uso.
 P261 Evitar respirar los vapores.
 P271 Utilizar únicamente en exteriores o en un lugar bien ventilado.
 P273 Evitar su liberación al medio ambiente.
 P280 Llevar guantes, prendas, gafas y máscara de protección.
 P312 Llamar a un CENTRO DE TOXICOLOGIA si la persona se encuentra mal.
 P391 Recoger el vertido.
 P405 Guardar bajo llave.
 P410+P412 Proteger de la luz del sol. No exponer a temperaturas superiores a 50 °C/122°F.
 P501.A Eliminar el contenido/el recipiente en un punto de recogida pública de residuos especiales o peligrosos.

Disposiciones especiales:

Ninguna

Contiene

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
 Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane
 Acetona; propan-2-ona; propanona

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

Ninguna

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

Contenido del producto:

Hidrocarburos alifáticos > 30 %

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
$\geq 35\%$ - < 40%	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	EC: 927-510-4 REACH No.: 01-2119475515-33	⚠ 2.6/2 Flam. Liq. 2 H225 ⚠ 3.10/1 Asp. Tox. 1 H304 ⚠ 4.1/C2 Aquatic Chronic 2 H411 ⚠ 3.2/2 Skin Irrit. 2 H315 ⚠ 3.8/3 STOT SE 3 H336
$\geq 35\%$ - < 40%	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	CAS: 92128-66-0 EC: 921-024-6 REACH No.: 01-2119475514-35	⚠ 2.6/2 Flam. Liq. 2 H225 ⚠ 3.10/1 Asp. Tox. 1 H304 ⚠ 4.1/C2 Aquatic Chronic 2 H411 ⚠ 3.2/2 Skin Irrit. 2 H315 ⚠ 3.8/3 STOT SE 3 H336
$\geq 20\%$ -	Acetona; propan-2-ona;	Número 606-001-00-8	⚠ 2.6/2 Flam. Liq. 2 H225

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< 25%	propanona	Index: CAS: EC: REACH No.:	67-64-1 200-662-2 01- 2119471330 -49	<ul style="list-style-type: none"> ⚠ 3.3/2 Eye Irrit. 2 H319 ⚠ 3.8/3 STOT SE 3 H336
>= 3% - < 5%	Propano	Número Index: CAS: EC:	601-003-00-5 74-98-6 200-827-9	<ul style="list-style-type: none"> ⚠ 2.2/1A Flam. Gas 1A H220 ⚠ 2.5/L Press Gas (Liq.) H280
>= 3% - < 5%	e isobutano	Número Index: CAS: EC:	601-004-00-0 75-28-5 200-857-2	<ul style="list-style-type: none"> ⚠ 2.2/1A Flam. Gas 1A H220 ⚠ 2.5/L Press Gas (Liq.) H280
>= 3% - < 5%	Chilled liquid carbon dioxide	CAS: EC:	124-38-9 204-696-9	<ul style="list-style-type: none"> ⚠ 2.5/RL Press Gas (Ref. Liq.) H281

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

SECCIÓN 5. Medidas de lucha contra incendios

5.1. Medios de extinción

Medios de extinción apropiados:

Espuma

Con polvo.

Con anhídrido carbónico.

Medios de extinción no recomendados:

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- 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
Utilizar equipos respiratorios apropiados.
Recoger por separado el agua contaminada utilizada para extinguir el incendio. No descargarla en la red de alcantarillado.
Si es posible, desde el punto de vista de la seguridad, retirar de inmediato del área los contenedores no dañados.

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
Lavar con abundante agua.
- 6.4. Referencia a otras secciones
Véanse también los apartados 8 y 13.

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
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.
Ninguna en particular.
Indicaciones para los locales:
Frescos y adecuadamente aireados.
- 7.3. Usos específicos finales
Ningún uso particular

SECCIÓN 8. Controles de exposición/protección individual

- 8.1. Parámetros de control
Acetona; propan-2-ona; propanona - CAS: 67-64-1

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UE - TWA(8h): 1210 mg/m³, 500 ppm
ACGIH - TWA(8h): 250 ppm - STEL: 500 ppm - Notas: A4, BEI - URT and eye irr, CNS impair

Propano - CAS: 74-98-6

ACGIH - Notas: (D, EX) - Asphyxia

VLE short - 1000 ppm

e isobutano - CAS: 75-28-5

ACGIH - STEL: 1000 ppm - Notas: (EX) - CNS impair

VLE short - 1000 ppm

Chilled liquid carbon dioxide - CAS: 124-38-9

UE - TWA(8h): 9000 mg/m³, 5000 ppm

ACGIH - TWA(8h): 5000 ppm - STEL: 30000 ppm - Notas: Asphyxia

Valores límites de exposición DNEL

N.A.

Valores límites de exposición PNEC

N.A.

8.2. Controles de la exposición

Protección de los ojos:

Gafas de seguridad

Cumple con la norma EN 166

Protección de la piel:

ropa protectora

Protección de las manos:

Caucho butilo.

Conformes EN 374.

Protección respiratoria:

Utilizar una protección respiratoria adecuada.

Riesgos térmicos:

Ninguno

Controles de la exposición ambiental:

Ninguno

Controles técnicos apropiados:

Ninguno

SECCIÓN 9. Propiedades físicas y químicas

9.1. Información sobre propiedades físicas y químicas básicas

Propiedad	Valor	Método:	Notas
Estado físico:	Líquido	--	--
Color:	incoloro	--	--
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:	N.A.	--	--
Límite superior e inferior de explosividad:	N.A.	--	--

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Punto de ignición (flash point, fp):	-20°C	--	--
Temperatura de autoencendido:	N.A.	--	--
Temperatura de descomposición:	N.A.	--	--
pH:	N.A.	--	--
Viscosidad cinemática:	N.A.	--	--
Hidrosolubilidad:	N.A.	--	--
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:	0,7431	--	--
Densidad de vapor relativa:	N.A.	--	--
Características de las partículas:			
Tamaño de las partículas:	N.A.	--	--

9.2. Otros datos

Ninguna otra información relevante

SECCIÓN 10. Estabilidad y reactividad

10.1. Reactividad

Estable en condiciones normales

10.2. Estabilidad química

Estable en condiciones normales

10.3. Posibilidad de reacciones peligrosas

Ninguno

10.4. Condiciones que deben evitarse

Estable en condiciones normales.

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:

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a) toxicidad aguda

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No clasificado

A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

Ensayo: LC50 - Vía: Inhalación - Especies: Rata 796 mg/l - Duración: 4h

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

El producto está clasificado: STOT SE 3 H336

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:

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

a) toxicidad aguda:

Ensayo: LD50 - Vía: Oral - Especies: Rata > 5840 mg/kg

Ensayo: LD50 - Vía: Piel - Especies: Rata > 2920 mg/kg

Ensayo: LC50 - Vía: Inhalación - Especies: Rata > 23300 mg/kg - Duración: 4h

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane - CAS: 92128-66-0

a) toxicidad aguda:

Ensayo: LD50 - Vía: Oral - Especies: Rata > 5840 mg/kg

Ensayo: LD50 - Vía: Piel - Especies: Rata > 2920 mg/kg

Ensayo: LC50 - Vía: Inhalación - Especies: Rata 2 25.2 mg/l - Duración: 4h

Acetona; propan-2-ona; propanona - CAS: 67-64-1

a) toxicidad aguda:

Ensayo: LD50 - Vía: Oral - Especies: Rata 5800 mg/kg

Ensayo: LD50 - Vía: Piel - Especies: Conejo 20000 mg/kg

Ensayo: LC50 - Vía: Inhalación - Especies: Rata 76 mg/l - Duración: 4h

Propano - CAS: 74-98-6

a) toxicidad aguda:

Ensayo: LC50 - Vía: Inhalación - Especies: Rata 20 mg/l - Duración: 4h

e isobutano - CAS: 75-28-5

a) toxicidad aguda:

Ensayo: LC50 - Vía: Inhalación - Especies: Rata > 50 mg/l - Duración: 4h

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

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

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

a) Toxicidad acuática aguda:

Parámetro: EC50 - Especies: Daphnia 3 mg/l - Duración h.: 48

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane - CAS: 92128-66-0

a) Toxicidad acuática aguda:

Parámetro: EC50 - Especies: Daphnia 3 mg/l - Duración h.: 48

Acetona; propan-2-ona; propanona - CAS: 67-64-1

a) Toxicidad acuática aguda:

Parámetro: EC50 - Especies: Daphnia 8800 mg/l - Duración h.: 48

12.2. Persistencia y degradabilidad

Ninguno

N.A.

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 $\geq 0.1\%$

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: 1950

IATA-UN Number: 1950

IMDG-UN Number: 1950

14.2. Designación oficial de transporte de las Naciones Unidas

ADR-Shipping Name: AEROSOLES, inflamables

IATA-Shipping Name: AEROSOLES, inflamables

IMDG-Shipping Name: AEROSOLES, inflamables

IMDG-Designación del transporte: AEROSOLS

14.3. Clase(s) de peligro para el transporte

ADR-Class: 2

ADR - Número de identificación del peligro: -

IATA-Class: 2

IATA-Label: 2.1

IMDG-Class: 2

IMDG-Clase: 2.1 UN 1950

14.4. Grupo de embalaje

ADR-Packing Group: -

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- IATA-Packing group: -
IMDG-Packing group: -
- 14.5. Peligros para el medio ambiente
ADR-Contaminante ambiental: Sí
IMDG-Marine pollutant: Marine Pollutant
IMDG-EmS: F-D,
S-U
- 14.6. Precauciones particulares para los usuarios
ADR-Subsidiary hazards: See SP63
ADR-S.P.: 190 327 344 625
ADR-Categoría de transporte (Código de restricción en túneles): 2 (D)
IATA-Passenger Aircraft: 203
IATA-Subsidiary hazards: See SP63
IATA-Cargo Aircraft: 203
IATA-S.P.: A145 A167 A802
IATA-ERG: 10L
IMDG-Subsidiary hazards: See SP63
IMDG-Stowage and handling: SW1 SW2
IMDG-Segregation: SG69
- 14.7. Transporte marítimo a granel con arreglo a los instrumentos de la OMI
N.A.
Limited Quantity: 1 L
Exempted Quantity: E0

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:

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Restricción 75

Compuestos orgánicos volátiles - COV = 96.70 %

Compuestos orgánicos volátiles - COV = 967.00 g/Kg

Compuestos orgánicos volátiles - COV = 718.58 g/l

Cuando sean aplicables, hágase referencia a las siguientes normativas:

Regulated Product according to Regulation (EU) 1148/2019. All suspicious transactions and significant disappearances and thefts must be reported to the relevant national contact point.

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: P3a, E2

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

Ninguna

SECCIÓN 16. Otra información

Texto de las frases utilizadas en el párrafo 3:

H225 Líquido y vapores muy inflamables.

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

H411 Tóxico para los organismos acuáticos, con efectos nocivos duraderos.

H315 Provoca irritación cutánea.

H336 Puede provocar somnolencia o vértigo.

H319 Provoca irritación ocular grave.

H220 Gas extremadamente inflamable.

H280 Contiene gas a presión; peligro de explosión en caso de calentamiento.

H281 Contiene gas refrigerado; puede provocar quemaduras o lesiones criogénicas.

Clase y categoría de peligro	Código	Descripción
Flam. Gas 1A	2.2/1A	Gases inflamables, Categoría 1A
Aerosols 1	2.3/1	Aerosoles, Categoría 1
Press Gas (Liq.)	2.5/L	Gases a presión (Gas licuado)
Press Gas (Ref. Liq.)	2.5/RL	Gases a presión (Gas licuado refrigerado)
Flam. Liq. 2	2.6/2	Líquidos inflamables, Categoría 2
Asp. Tox. 1	3.10/1	Peligro por aspiración, Categoría 1
Skin Irrit. 2	3.2/2	Irritación cutánea, Categoría 2
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 Chronic 2	4.1/C2	Peligro crónico (a largo plazo) para el medio

Ficha de datos de seguridad BRAKES AND METAL CLEANER



		ambiente acuático, Categoría 2
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Parágrafos modificados respecto la revisión anterior

SECCIÓN 2. Identificación de los peligros

Clasificación y procedimiento utilizado para determinar la clasificación de las mezclas con arreglo al Reglamento (CE) n° 1272/2008 [CLP]:

Clasificación con arreglo al Reglamento (CE) n° 1272/2008	Procedimiento de clasificación
Aerosols 1, H222, H229	Conforme a datos obtenidos de los ensayos
Skin Irrit. 2, H315	Método de cálculo
Eye Irrit. 2, H319	Método de cálculo
STOT SE 3, H336	Método de cálculo
Aquatic Chronic 2, H411	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.

Ficha de datos de seguridad BRAKES AND METAL CLEANER



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
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, 17/07/2019

Substance identity

Chemical name	Heptane HYDROCARBONS C7, N-ALKANES, ISOALKANES, CYCLICS
EINECS No.	927-510-4

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1. **ES 1** Use at industrial site
2. **ES 2** Widespread use by professional workers
3. **ES 3** Use at industrial site
4. **ES 4** Widespread use by professional workers

1. ES 1 Use at industrial site

1.1 TITLE SECTION

Exposure Scenario name	Use in coatings
Date - Version	17/07/2019 - 1.0
Life Cycle Stage	Use at industrial site
Main user group	Industrial uses

Environment Contributing Scenario

CS1 Covered by	ERC4
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Worker Contributing Scenario

CS2 Industrial	PROC5 - PROC1 - PROC2 - PROC3 - PROC4 - PROC7 - PROC8a - PROC8b - PROC9 - PROC10 - PROC13 - PROC14 - PROC15
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1.2 Conditions of use affecting exposure

1.2. 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)
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Amount used, frequency and duration of use (or from service life)

Amounts used:

Annual site tonnage 400 t(tonnes)/year

Daily amount per site 20000 kg/day

Maximum allowable site tonnage (MSafe): 62000 kg/day

Release type: Continuous release

Emission days: 20 days per year

Technical and organisational conditions and measures

Control measures to prevent releases

Treat air emission to provide the required removal efficiency of (%):	Air - minimum efficiency of: 90 %
No discharge of substance into waste water	Water - minimum efficiency of: 88.2 %

Conditions and measures related to sewage treatment plant

STP type:

Municipal Sewage Treatment Plant

Water - minimum efficiency of: = 96.2 %

STP effluent (m³/day): 2000

Conditions and measures related to treatment of waste (including article waste)

Waste treatment

Product residual disposal complies with applicable regulations.

Other conditions affecting environmental exposure

Local marine water dilution factor: 100

Local freshwater dilution factor: 10

1.2. CS2: Worker Contributing Scenario: Industrial (PROC5, PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, 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 - 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 - Tableting, compression, extrusion, pelletisation, granulation - Use as laboratory reagent (PROC5, PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC14, PROC15)

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

Liquid

Vapour pressure:

< 20 kPa

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

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

- Remove spills immediately
- Ensure operatives are trained to minimise exposures.
- Store substance within a closed system.

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

- Wear suitable gloves tested to EN374.
- Wear suitable face shield.
- Use suitable eye protection.

1.3 Exposure estimation and reference to its source**1.3. CS1: Environment Contributing Scenario: Covered by (ERC4)**

Release route	Release rate	Release estimation method
Air	98 %	N/A
Water	0.07 %	N/A
soil	0 %	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 Widespread use by professional workers

2.1 TITLE SECTION

Exposure Scenario name	Use in coatings
Date - Version	17/07/2019 - 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
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Worker Contributing Scenario

CS2 General use from professional operators	PROC5 - PROC1 - PROC2 - PROC3 - PROC4 - PROC8a - PROC8b - PROC10 - PROC11 - PROC13 - PROC15 - PROC19
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2.2 Conditions of use affecting exposure

2.2. 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)
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Amount used, frequency and duration of use (or from service life)

Amounts used:

Annual site tonnage 0.15 t(tonnes)/year
Daily amount per site 0.41 kg/day

Maximum allowable site tonnage (MSafe): 1500 kg/day

Release type: Continuous release

Emission days: 365 days per year

Technical and organisational conditions and measures

Control measures to prevent releases

Treat air emission to provide the required removal efficiency of (%):
Prevent discharge of undissolved substance to or recover from onsite wastewater.

Conditions and measures related to sewage treatment plant

STP type:

Municipal Sewage Treatment Plant
Water - minimum efficiency of: = 96.2 %

STP effluent (m³/day): 2000

Conditions and measures related to treatment of waste (including article waste)

Waste treatment

Do not apply industrial sludge to natural soils.
Product residual disposal complies with applicable regulations.

Other conditions affecting environmental exposure

Local marine water dilution factor: 100

Local freshwater dilution factor: 10

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

Additional Good Practice Advice:

Do not use sludge as fertiliser.

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

Vapour pressure:

< 20 kPa

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

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

Use in contained systems
Ensure operatives are trained to minimise exposures.
Carry out in a vented booth or extracted enclosure.

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

Wear suitable gloves tested to EN374.
Wear suitable face shield.
Use suitable eye protection.

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

Release route	Release rate	Release estimation method
Air	98 %	N/A
soil	1 %	N/A
Water	0.1 %	N/A

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

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	Use in cleaning agents
Date - Version	17/07/2019 - 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
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Worker Contributing Scenario

CS2 Industrial	PROC1 - PROC2 - PROC3 - PROC4 - PROC7 - PROC8a - PROC8b - PROC10 - PROC13
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3.2 Conditions of use affecting exposure

3.2. 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)
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Amount used, frequency and duration of use (or from service life)

Amounts used:

Annual site tonnage 74 t(tonnes)/year
Daily amount per site 3700 kg/day

Maximum allowable site tonnage (MSafe): 4600000 kg/day

Release type: Continuous release

Emission days: 20 days per year

Technical and organisational conditions and measures

Control measures to prevent releases

Treat air emission to provide the required removal efficiency of (%):	Air - minimum efficiency of: 70 %
Prevent discharge of undissolved substance to or recover from onsite wastewater.	

Conditions and measures related to sewage treatment plant

STP type:

Municipal Sewage Treatment Plant
Water - minimum efficiency of: = 96.2 %

STP effluent (m³/day): 2000

Conditions and measures related to treatment of waste (including article waste)

Waste treatment

Do not apply industrial sludge to natural soils.
External treatment and disposal of waste should comply with applicable local and/or national regulations.

Other conditions affecting environmental exposure

Local marine water dilution factor: 100

Local freshwater dilution factor: 10

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

Additional Good Practice Advice:

Do not apply industrial sludge to natural soils.

3.2. 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)
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Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

< 20 kPa

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

Technical and organisational conditions and measures

Technical and organisational measures

Remove spills immediately

Ensure operatives are trained to minimise exposures.

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

3.3. CS1: Environment Contributing Scenario: Covered by (ERC4)

Release route	Release rate	Release estimation method
Air	1 %	N/A
Water	3E-06 %	N/A
soil	0 %	N/A

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

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	Cleaning agent
Date - Version	17/07/2019 - 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
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Worker Contributing Scenario

CS2 General use from professional operators	PROC1 - PROC2 - PROC3 - PROC4 - PROC8a - PROC8b - PROC10 - PROC11 - PROC13
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4.2 Conditions of use affecting exposure

4.2. 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)
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Amount used, frequency and duration of use (or from service life)

Amounts used:

Annual site tonnage 0.012 t(tonnes)/year
Daily amount per site 0.032 kg/day

Maximum allowable site tonnage (MSafe): 170 kg/day

Release type: Continuous release

Emission days: 365 days per year

Technical and organisational conditions and measures

Control measures to prevent releases

Treat air emission to provide the required removal efficiency of (%):
Prevent discharge of undissolved substance to or recover from onsite wastewater.
Do not apply industrial sludge to natural soils.

Conditions and measures related to sewage treatment plant

STP type:

Municipal Sewage Treatment Plant
Water - minimum efficiency of: = 96.2 %

STP effluent (m³/day): 2000

Conditions and measures related to treatment of waste (including article waste)

Waste treatment

Do not apply industrial sludge to natural soils.
External treatment and disposal of waste should comply with applicable local and/or national regulations.

Other conditions affecting environmental exposure

Local marine water dilution factor: 100

Local freshwater dilution factor: 10

4.2. CS2: Worker Contributing Scenario: General use from professional operators (PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC10, PROC11, 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 - 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 (PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC10, PROC11, PROC13)
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Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

< 20 kPa

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

Technical and organisational conditions and measures

Technical and organisational measures

- Remove spills immediately
- Ensure operatives are trained to minimise exposures.
- Handle substance within a closed system.

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.

Ventilation rate: Provide forced ventilation

4.3 Exposure estimation and reference to its source

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

Release route	Release rate	Release estimation method
Air	2 %	N/A
soil	0 %	N/A
Water	1E-06 %	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.

Exposure Scenario, 28/08/2019

Substance identity	
Chemical name	2-PROPANONE
CAS No.	67-64-1
EINECS No.	200-662-2

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1. **ES 1** Use at industrial site
2. **ES 2** Widespread use by professional workers
3. **ES 3** Consumer use; Various products (PC9b, PC9a, PC1, PC4, PC15)
4. **ES 4** Use at industrial site
5. **ES 5** Widespread use by professional workers
6. **ES 6** Consumer use; Various products (PC9b, PC9a, PC3, PC4, PC24)

1. ES 1 Use at industrial site

1.1 TITLE SECTION

Exposure Scenario name	Professional application of coatings and inks
Date - Version	28/08/2019 - 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
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Worker Contributing Scenario

CS2 Industrial	PROC1
CS3 Industrial	PROC2
CS4 Industrial	PROC3
CS5 Industrial	PROC4
CS6 Industrial	PROC5
CS7 Industrial	PROC7
CS8 Industrial	PROC8a
CS9 Industrial	PROC8b
CS10 Industrial	PROC9
CS11 Industrial	PROC10
CS12 Industrial	PROC13
CS13 Industrial	PROC15
CS14 Industrial	PROC19

1.2 Conditions of use affecting exposure

1.2. 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)
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Amount used, frequency and duration of use (or from service life)

Release type: Continuous release

Emission days: 360 days per year

Technical and organisational conditions and measures

Control measures to prevent releases

Treat air emission to provide the required removal efficiency of (%):

Air - minimum efficiency of: 90 %

Conditions and measures related to treatment of waste (including article waste)

Waste treatment

External treatment and disposal of waste should comply with applicable local and/or national regulations.

1.2. CS2: Worker Contributing Scenario: Industrial (PROC1)

Process Categories	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)
Product (article) characteristics	
Physical form of product: Liquid, vapour pressure > 10 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	
Duration: Covers daily exposures up to 8 hours	
Technical and organisational conditions and measures	
Technical and organisational measures Handle substance within a closed system. Ensure operation is undertaken outdoors.	
Conditions and measures related to personal protection, hygiene and health evaluation	
Personal protection Wear suitable gloves tested to EN374. Use eye protection according to EN 166.	

1.2. CS3: Worker Contributing Scenario: Industrial (PROC2)

Process Categories	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)
Product (article) characteristics	
Physical form of product: Liquid, vapour pressure > 10 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	
Duration: Covers daily exposures up to 8 hours	
Technical and organisational conditions and measures	
Technical and organisational measures Handle substance within a closed system. Ensure operation is undertaken outdoors.	
Conditions and measures related to personal protection, hygiene and health evaluation	
Personal protection Wear suitable gloves tested to EN374. Use eye protection according to EN 166.	

1.2. CS4: Worker Contributing Scenario: Industrial (PROC3)

Process Categories	Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)
Product (article) characteristics	
Physical form of product: Liquid, vapour pressure > 10 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	

Duration:

Covers daily exposures up to 8 hours

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

Handle substance within a closed system.
Ensure operation is undertaken outdoors.

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

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

1.2. CS5: Worker Contributing Scenario: Industrial (PROC4)**Process Categories**

Chemical production where opportunity for exposure arises (PROC4)

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

Liquid, vapour pressure > 10 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**Duration:**

Covers daily exposures up to 8 hours

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

Handle substance within a closed system.
Ensure operation is undertaken outdoors.

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

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

1.2. CS6: Worker Contributing Scenario: Industrial (PROC5)**Process Categories**

Mixing or blending in batch processes (PROC5)

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

Liquid, vapour pressure > 10 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**Duration:**

Covers daily exposures up to 8 hours

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

Handle substance within a closed system.
Ensure operation is undertaken outdoors.

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

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

1.2. CS7: Worker Contributing Scenario: Industrial (PROC7)

Process Categories	Industrial spraying (PROC7)
Product (article) characteristics	
Physical form of product: Liquid, vapour pressure > 10 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	
Duration: Covers daily exposures up to 8 hours	
Technical and organisational conditions and measures	
Technical and organisational measures Ensure operation is undertaken outdoors. For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8.	
Conditions and measures related to personal protection, hygiene and health evaluation	
Personal protection Wear suitable gloves tested to EN374. Use eye protection according to EN 166. Respiratory protection in accordance with EN141	
1.2. CS8: Worker Contributing Scenario: Industrial (PROC8a)	
Process Categories	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a)
Product (article) characteristics	
Physical form of product: Liquid, vapour pressure > 10 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	
Duration: Covers daily exposures up to 8 hours	
Technical and organisational conditions and measures	
Technical and organisational measures Handle substance within a closed system. Ensure operation is undertaken outdoors.	
Conditions and measures related to personal protection, hygiene and health evaluation	
Personal protection Wear suitable gloves tested to EN374. Use eye protection according to EN 166.	
1.2. CS9: Worker Contributing Scenario: Industrial (PROC8b)	
Process Categories	Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b)
Product (article) characteristics	
Physical form of product: Liquid, vapour pressure > 10 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	
Duration: Covers daily exposures up to 8 hours	

Technical and organisational conditions and measures

Technical and organisational measures

Handle substance within a closed system.
Ensure operation is undertaken outdoors.

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

Personal protection

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

1.2. CS10: Worker Contributing Scenario: Industrial (PROC9)

Process Categories

Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9)

Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 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

Duration:

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Technical and organisational measures

Handle substance within a closed system.
Ensure operation is undertaken outdoors.

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

Personal protection

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

1.2. CS11: Worker Contributing Scenario: Industrial (PROC10)

Process Categories

Roller application or brushing (PROC10)

Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 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

Duration:

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Technical and organisational measures

Handle substance within a closed system.
Ensure operation is undertaken outdoors.

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

Personal protection

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

1.2. CS12: Worker Contributing Scenario: Industrial (PROC13)

Process Categories

Treatment of articles by dipping and pouring (PROC13)

Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 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

Duration:

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Technical and organisational measures

Handle substance within a closed system.
Ensure operation is undertaken outdoors.

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

Personal protection

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

1.2. CS13: Worker Contributing Scenario: Industrial (PROC15)

Process Categories

Use as laboratory reagent (PROC15)

Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 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

Duration:

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Technical and organisational measures

Handle substance within a closed system.
Ensure operation is undertaken outdoors.

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

Personal protection

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

1.2. CS14: Worker Contributing Scenario: Industrial (PROC19)

Process Categories

Manual activities involving hand contact (PROC19)

Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 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

Duration:

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Technical and organisational measures

Handle substance within a closed system.
Ensure operation is undertaken outdoors.

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

Personal protection

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

1.3 Exposure estimation and reference to its source

1.3. CS2: Worker Contributing Scenario: Industrial (PROC1)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	0.01 ppm	EASY TRA v2.0	2E-05
dermal, systemic, long-term	0.34 mg/kg bw/day	EASY TRA v2.0	0.002

1.3. CS3: Worker Contributing Scenario: Industrial (PROC2)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	50 ppm	EASY TRA v2.0	0.1
dermal, systemic, long-term	1.37 mg/kg bw/day	EASY TRA v2.0	0.01

1.3. CS4: Worker Contributing Scenario: Industrial (PROC3)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	100 ppm	EASY TRA v2.0	0.2
dermal, systemic, long-term	0.34 mg/kg bw/day	EASY TRA v2.0	0.002

1.3. CS5: Worker Contributing Scenario: Industrial (PROC4)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	100 ppm	EASY TRA v2.0	0.2
dermal, systemic, long-term	6.86 mg/kg bw/day	EASY TRA v2.0	0.04

1.3. CS6: Worker Contributing Scenario: Industrial (PROC5)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	250 ppm	EASY TRA v2.0	0.5
dermal, systemic, long-term	13.71 mg/kg bw/day	EASY TRA v2.0	0.07

1.3. CS7: Worker Contributing Scenario: Industrial (PROC7)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	25 ppm	EASY TRA v2.0	0.05
dermal, systemic, long-term	42.86 mg/kg bw/day	EASY TRA v2.0	0.23
inhalative, systemic, long-term	350 ppm	EASY TRA v2.0	0.7
inhalative, systemic, long-term	50 ppm	EASY TRA v2.0	0.1
dermal, systemic, long-term	2.14 mg/kg bw/day	EASY TRA v2.0	0.01

1.3. CS8: Worker Contributing Scenario: Industrial (PROC8a)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	250 ppm	EASY TRA v2.0	0.5
dermal, systemic, long-term	13.71 mg/kg bw/day	EASY TRA v2.0	0.07

1.3. CS9: Worker Contributing Scenario: Industrial (PROC8b)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	150 ppm	EASY TRA v2.0	0.3
dermal, systemic, long-term	6.86 mg/kg bw/day	EASY TRA v2.0	0.037

1.3. CS10: Worker Contributing Scenario: Industrial (PROC9)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	200 ppm	EASY TRA v2.0	0.4
dermal, systemic, long-term	6.86 mg/kg bw/day	EASY TRA v2.0	0.04

1.3. CS11: Worker Contributing Scenario: Industrial (PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	250 ppm	EASY TRA v2.0	0.5
dermal, systemic, long-term	27.43 mg/kg bw/day	EASY TRA v2.0	0.15

1.3. CS12: Worker Contributing Scenario: Industrial (PROC13)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
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inhalative, systemic, long-term	250 ppm	EASY TRA v2.0	0.5
dermal, systemic, long-term	13.71 mg/kg bw/day	EASY TRA v2.0	0.07

1.3. CS13: Worker Contributing Scenario: Industrial (PROC15)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	50 ppm	EASY TRA v2.0	0.1
dermal, systemic, long-term	0.34 mg/kg bw/day	EASY TRA v2.0	0

1.3. CS14: Worker Contributing Scenario: Industrial (PROC19)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	250 ppm	EASY TRA v2.0	0.5
dermal, systemic, long-term	28.29 mg/kg bw/day	EASY TRA v2.0	0.15

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

2.1 TITLE SECTION

Exposure Scenario name	Professional application of coatings and inks
Date - Version	28/08/2019 - 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	ERC6d - ERC8a - ERC8c - ERC8f
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Worker Contributing Scenario

CS2 General use from professional operators	PROC1
CS3 General use from professional operators	PROC2
CS4 General use from professional operators	PROC3
CS5 General use from professional operators	PROC4 - PROC8b - PROC9
CS6 General use from professional operators	PROC5 - PROC8a
CS7 General use from professional operators	PROC10
CS8 General use from professional operators	PROC11
CS9 General use from professional operators	PROC13
CS10 General use from professional operators	PROC19

2.2 Conditions of use affecting exposure

2.2. CS1: Environment Contributing Scenario: Covered by (ERC6d, ERC8a, ERC8c, ERC8f)

Environmental release categories	Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article) - Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) - Widespread use leading to inclusion into/onto article (indoor) - Widespread use leading to inclusion into/onto article (outdoor) (ERC6d, ERC8a, ERC8c, ERC8f)
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Amount used, frequency and duration of use (or from service life)

Release type: Continuous release

Emission days: 360 days per year

Technical and organisational conditions and measures

Control measures to prevent releases

Treat air emission to provide the required removal efficiency of (%):

Air - minimum efficiency of: 90 %

Conditions and measures related to treatment of waste (including article waste)

Waste treatment

External treatment and disposal of waste should comply with applicable local and/or national regulations.

2.2. CS2: Worker Contributing Scenario: General use from professional operators (PROC1)

Process Categories	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)
Product (article) characteristics	
Physical form of product: Liquid, vapour pressure > 10 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	
Duration: Covers daily exposures up to 8 hours	
Technical and organisational conditions and measures	
Technical and organisational measures Handle substance within a closed system. Ensure operation is undertaken outdoors.	
Conditions and measures related to personal protection, hygiene and health evaluation	
Personal protection Wear suitable gloves tested to EN374. Use eye protection according to EN 166.	
2.2. CS3: Worker Contributing Scenario: General use from professional operators (PROC2)	
Process Categories	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)
Product (article) characteristics	
Physical form of product: Liquid, vapour pressure > 10 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	
Duration: Covers daily exposures up to 8 hours	
Technical and organisational conditions and measures	
Technical and organisational measures Handle substance within a closed system. Ensure operation is undertaken outdoors.	
Conditions and measures related to personal protection, hygiene and health evaluation	
Personal protection Wear suitable gloves tested to EN374. Use eye protection according to EN 166.	
2.2. CS4: Worker Contributing Scenario: General use from professional operators (PROC3)	
Process Categories	Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)
Product (article) characteristics	
Physical form of product: Liquid, vapour pressure > 10 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	
Duration: Covers daily exposures up to 8 hours	

Technical and organisational conditions and measures

Technical and organisational measures

Handle substance within a closed system.
Ensure operation is undertaken outdoors.

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

Personal protection

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

2.2. CS5: Worker Contributing Scenario: General use from professional operators (PROC4, PROC8b, PROC9)

Process Categories	Chemical production where opportunity for exposure arises - Transfer of substance or mixture (charging and discharging) at dedicated facilities - Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC4, PROC8b, PROC9)
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Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 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

Duration:

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Technical and organisational measures

Handle substance within a closed system.
Ensure operation is undertaken outdoors.

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

Personal protection

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

2.2. CS6: Worker Contributing Scenario: General use from professional operators (PROC5, PROC8a)

Process Categories	Mixing or blending in batch processes - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC5, PROC8a)
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Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 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

Duration:

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Technical and organisational measures

Ensure operation is undertaken outdoors.
Avoid carrying out activities involving exposure for more than 4 hours per day.

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

Personal protection

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

2.2. CS7: Worker Contributing Scenario: General use from professional operators (PROC10)

Process Categories	Roller application or brushing (PROC10)
Product (article) characteristics	
Physical form of product: Liquid, vapour pressure > 10 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	
Duration: Covers daily exposures up to 8 hours	
Technical and organisational conditions and measures	
Technical and organisational measures Handle substance within a closed system. Ensure operation is undertaken outdoors. Avoid carrying out activities involving exposure for more than 4 hours per day.	
Conditions and measures related to personal protection, hygiene and health evaluation	
Personal protection Wear suitable gloves tested to EN374. Use eye protection according to EN 166.	
2.2. CS8: Worker Contributing Scenario: General use from professional operators (PROC11)	
Process Categories	Non industrial spraying (PROC11)
Product (article) characteristics	
Physical form of product: Liquid, vapour pressure > 10 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	
Duration: Covers daily exposures up to 8 hours	
Technical and organisational conditions and measures	
Technical and organisational measures Ensure operation is undertaken outdoors. Avoid carrying out activities involving exposure for more than 4 hours per day. Limit the substance content in the product to 25 %. Avoid carrying out activities involving exposure for more than 1 hour per day.	
Conditions and measures related to personal protection, hygiene and health evaluation	
Personal protection Wear suitable gloves tested to EN374. Use eye protection according to EN 166. Wear a respirator conforming to EN140.	
2.2. CS9: Worker Contributing Scenario: General use from professional operators (PROC13)	
Process Categories	Treatment of articles by dipping and pouring (PROC13)
Product (article) characteristics	
Physical form of product: Liquid, vapour pressure > 10 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	

Duration:

Covers daily exposures up to 8 hours

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

Handle substance within a closed system.
Ensure operation is undertaken outdoors.

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

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

2.2. CS10: Worker Contributing Scenario: General use from professional operators (PROC19)**Process Categories**

Manual activities involving hand contact (PROC19)

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

Liquid, vapour pressure > 10 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**Duration:**

Covers daily exposures up to 8 hours

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

Handle substance within a closed system.
Ensure operation is undertaken outdoors.
Avoid carrying out activities involving exposure for more than 1 hour per day.
Limit the substance content in the product to 25 %.

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

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

2.3 Exposure estimation and reference to its source**2.3. CS2: Worker Contributing Scenario: General use from professional operators (PROC1)**

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	0.01 ppm	EASY TRA v2.0	2E-05
dermal, systemic, long-term	0.34 mg/kg bw/day	EASY TRA v2.0	0.002

2.3. CS3: Worker Contributing Scenario: General use from professional operators (PROC2)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	50 ppm	EASY TRA v2.0	0.1
dermal, systemic, long-term	1.37 mg/kg bw/day	EASY TRA v2.0	0.01

2.3. CS4: Worker Contributing Scenario: General use from professional operators (PROC3)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	100 ppm	EASY TRA v2.0	0.2
dermal, systemic, long-term	0.34 mg/kg bw/day	EASY TRA v2.0	0.002

2.3. CS5: Worker Contributing Scenario: General use from professional operators (PROC4, PROC8b, PROC9)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	250 ppm	EASY TRA v2.0	0.5
dermal, systemic, long-term	6.86 mg/kg bw/day	EASY TRA v2.0	0.04

2.3. CS6: Worker Contributing Scenario: General use from professional operators (PROC5, PROC8a)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	350 ppm	EASY TRA v2.0	0.7
dermal, systemic, long-term	13.71 mg/kg bw/day	EASY TRA v2.0	0.07
inhalative, systemic, long-term	300 ppm	EASY TRA v2.0	0.6
dermal, systemic, long-term	1.37 mg/kg bw/day	EASY TRA v2.0	0.007

2.3. CS7: Worker Contributing Scenario: General use from professional operators (PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	1.37 mg/kg bw/day	EASY TRA v2.0	0.007

2.3. CS8: Worker Contributing Scenario: General use from professional operators (PROC11)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	2.14 mg/kg bw/day	EASY TRA v2.0	0.01
inhalative, systemic, long-term	200 ppm	EASY TRA v2.0	0.4
dermal, systemic, long-term	64.28 mg/kg bw/day	EASY TRA v2.0	0.35
inhalative, systemic, long-term	252 ppm	EASY TRA v2.0	0.5
dermal, systemic, long-term	107.14 mg/kg bw/day	EASY TRA v2.0	0.58

2.3. CS9: Worker Contributing Scenario: General use from professional operators (PROC13)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	250 ppm	EASY TRA v2.0	0.5
dermal, systemic, long-term	13.71 mg/kg bw/day	EASY TRA v2.0	0.07

2.3. CS10: Worker Contributing Scenario: General use from professional operators (PROC19)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	300 ppm	EASY TRA v2.0	0.6
dermal, systemic, long-term	16.97 mg/kg bw/day	EASY TRA v2.0	0.09

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 Consumer use; Various products (PC9b, PC9a, PC1, PC4, PC15)

3.1 TITLE SECTION

Exposure Scenario name	Consumer application of coatings
Date - Version	28/08/2019 - 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) - Non-metal surface treatment products (PC15) - Lubricants, greases, release products (PC24)

Environment Contributing Scenario

CS1 Covered by	ERC8a - ERC8c - ERC8d - ERC8f
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Consumer Contributing Scenario

CS2 Consumer	PC1
CS3 Consumer	PC1
CS4 Consumer	PC1
CS5 Consumer	PC4
CS6 Consumer	PC4
CS7 Consumer	PC4
CS8 Consumer	PC9a
CS9 Consumer	PC9a
CS10 Consumer	PC9a - PC15
CS11 Consumer	PC9a - PC15
CS12 Consumer	PC9b
CS13 Consumer	PC9b
CS14 Consumer	PC9b
CS15 Consumer	PC24
CS16 Consumer	PC31
CS17 Consumer	PC31

3.2 Conditions of use affecting exposure

3.2. CS1: Environment Contributing Scenario: Covered by (ERC8a, ERC8c, ERC8d, ERC8f)

Environmental release categories	Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) - Widespread use leading to inclusion into/onto article (indoor) - Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) - Widespread use leading to inclusion into/onto article (outdoor) (ERC8a, ERC8c, ERC8d, ERC8f)
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Amount used, frequency and duration of use (or from service life)

Release type: Continuous release

Emission days: 360 days per year

Conditions and measures related to treatment of waste (including article waste)

Waste treatment

External treatment and disposal of waste should comply with applicable local and/or national regulations.

3.2. CS2: Consumer Contributing Scenario: Consumer (PC1)

Product Categories

Adhesives, sealants (PC1)

Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 30 %

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 9 g

Duration:

Exposure duration 4 h

Frequency:

Covers exposure up to 365 days per year

Other conditions affecting consumers exposure

Room size: Covers use in room size of 20 m³

Temperature: Covers use at ambient temperatures.

Ventilation rate: Covers use under typical household ventilation.

3.2. CS3: Consumer Contributing Scenario: Consumer (PC1)

Product Categories

Adhesives, sealants (PC1)

Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 30 %

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 6390 g

Duration:

Exposure duration 6 h

Frequency:

Covers exposure up to 1 days per year

Other conditions affecting consumers exposure

Room size: Covers use in room size of 20 m³

Temperature: Covers use at ambient temperatures.

Ventilation rate: Covers use under typical household ventilation.

3.2. CS4: Consumer Contributing Scenario: Consumer (PC1)

Product Categories Adhesives, sealants (PC1)

Product (article) characteristics

Physical form of product:

Aerosol

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 30 %

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 85.05 g

Duration:

Exposure duration 4 h

Frequency:

Covers exposure up to 6 days per year

Other conditions affecting consumers exposure

Room size: Covers use in room size of 20 m³

Temperature: Covers use at ambient temperatures.

Ventilation rate: Covers use under typical household ventilation.

3.2. CS5: Consumer Contributing Scenario: Consumer (PC4)

Product Categories Anti-freeze and de-icing products (PC4)

Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers percentage substance in the product up to 1 %.

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 0.5 g

Duration:

Exposure duration 0.02 h

Frequency:

Covers exposure up to 365 days per year

Other conditions affecting consumers exposure

Room size: Covers use in a one car garage (>34 m³) under typical ventilation.

3.2. CS6: Consumer Contributing Scenario: Consumer (PC4)

Product Categories Anti-freeze and de-icing products (PC4)

Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 10 %

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

Amount per use 2000 g

Duration:

Exposure duration 0.17 h

Frequency:

Covers exposure up to 365 days per year

*Other conditions affecting consumers exposure***Room size:** Covers use in a one car garage (>34 m³) under typical ventilation.**3.2. CS7: Consumer Contributing Scenario: Consumer (PC4)****Product Categories**

Anti-freeze and de-icing products (PC4)

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

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 50 %

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

Amount per use 4 g

Duration:

Exposure duration 0.25 h

Frequency:

Covers exposure up to 365 days per year

*Other conditions affecting consumers exposure***Room size:** Covers use in a one car garage (>34 m³) under typical ventilation.**3.2. CS8: Consumer Contributing Scenario: Consumer (PC9a)****Product Categories**

Coatings and paints, thinners, paint removers (PC9a)

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

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 1.5 %

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

Amount per use 2760 g

Duration:

Exposure duration 2.2 h

Frequency:

Covers exposure up to 4 days per year

*Other conditions affecting consumers exposure***Room size:** Covers use in room size of 20 m³**Temperature:** Covers use at ambient temperatures.**Ventilation rate:** Covers use under typical household ventilation.**3.2. CS9: Consumer Contributing Scenario: Consumer (PC9a)****Product Categories**

Coatings and paints, thinners, paint removers (PC9a)

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

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 27.5 %

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

Amount per use 744 g

Duration:

Exposure duration 2.2 h

Frequency:

Covers exposure up to 6 days per year

*Other conditions affecting consumers exposure***Room size:** Covers use in room size of 20 m³**Temperature:** Covers use at ambient temperatures.**Ventilation rate:** Covers use under typical household ventilation.**3.2. CS10: Consumer Contributing Scenario: Consumer (PC9a, PC15)****Product Categories**

Coatings and paints, thinners, paint removers - Non-metal surface treatment products (PC9a, PC15)

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

Aerosol

Concentration of substance in product:

Covers concentrations up to 50 %

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

Amount per use 215 g

Duration:

Exposure duration 0.33 h

Frequency:

Covers exposure up to 2 days per year

*Other conditions affecting consumers exposure***Room size:** Covers use in a one car garage (>34 m³) under typical ventilation.

3.2. CS11: Consumer Contributing Scenario: Consumer (PC9a, PC15)

Product Categories	Coatings and paints, thinners, paint removers - Non-metal surface treatment products (PC9a, PC15)
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Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 2 %

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 491 g

Duration:

Exposure duration 2 h

Frequency:

Covers exposure up to 3 days per year

Other conditions affecting consumers exposure

Room size: Covers use in room size of 20 m³

3.2. CS12: Consumer Contributing Scenario: Consumer (PC9b)

Product Categories	Fillers, putties, plasters, modelling clay (PC9b)
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Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 27.5 %

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 85 g

Duration:

Exposure duration 4 h

Frequency:

Covers exposure up to 12 days per year

Other conditions affecting consumers exposure

Room size: Covers use in room size of 20 m³

Temperature: Covers use at ambient temperatures.

Ventilation rate: Covers use under typical household ventilation.

3.2. CS13: Consumer Contributing Scenario: Consumer (PC9b)

Product Categories	Fillers, putties, plasters, modelling clay (PC9b)
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Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 2 %

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

Amount per use 13800 g

Duration:

Exposure duration 2 h

Frequency:

Covers exposure up to 365 days per year

Other conditions affecting consumers exposure**Room size:** Covers use in room size of 20 m³**Temperature:** Covers use at ambient temperatures.**Ventilation rate:** Covers use under typical household ventilation.**3.2. CS14: Consumer Contributing Scenario: Consumer (PC9b)****Product Categories**

Fillers, putties, plasters, modelling clay (PC9b)

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

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 50 %

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

Amount per use 1.35 g

Frequency:

Covers exposure up to 365 days per year

Other conditions affecting consumers exposure**Room size:** Covers use in room size of 20 m³**Temperature:** Covers use at ambient temperatures.**Ventilation rate:** Covers use under typical household ventilation.**3.2. CS15: Consumer Contributing Scenario: Consumer (PC24)****Product Categories**

Lubricants, greases, release products (PC24)

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

Aerosol

Concentration of substance in product:

Covers concentrations up to 50 %

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

Amount per use 73 g

Duration:

Exposure duration 0.17 h

Frequency:

Covers exposure up to 6 days per year

Other conditions affecting consumers exposure**Room size:** Covers use in room size of 20 m³**Temperature:** Covers use at ambient temperatures.**Ventilation rate:** Covers use under typical household ventilation.**3.2. CS16: Consumer Contributing Scenario: Consumer (PC31)****Product Categories**

Polishes and wax blends (PC31)

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

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 50 %

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

Amount per use 142 g

Duration:

Exposure duration 1.23 h

Frequency:

Covers exposure up to 29 days per year

Other conditions affecting consumers exposure**Room size:** Covers use in room size of 20 m³**Temperature:** Covers use at ambient temperatures.**Ventilation rate:** Covers use under typical household ventilation.**3.2. CS17: Consumer Contributing Scenario: Consumer (PC31)****Product Categories**

Polishes and wax blends (PC31)

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

Aerosol

Concentration of substance in product:

Covers concentrations up to 50 %

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

Amount per use 35 g

Duration:

Exposure duration 0.33 h

Frequency:

Covers exposure up to 8 days per year

Other conditions affecting consumers exposure**Room size:** Covers use in room size of 20 m³**Temperature:** Covers use at ambient temperatures.**Ventilation rate:** Covers use under typical household ventilation.

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	Cleaning agent
Date - Version	28/08/2019 - 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
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Worker Contributing Scenario

CS2 Industrial	PROC1
CS3 Industrial	PROC2
CS4 Industrial	PROC3
CS5 Industrial	PROC4
CS6 Industrial	PROC5 - PROC8a
CS7 Industrial	PROC7
CS8 Industrial	PROC8b
CS9 Industrial	PROC9
CS10 Industrial	PROC10
CS11 Industrial	PROC13
CS12 Industrial	PROC19

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

Release type: Continuous release

Emission days: 360 days per year

Technical and organisational conditions and measures

Control measures to prevent releases

Treat air emission to provide the required removal efficiency of (%):	Air - minimum efficiency of: 90 %
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Conditions and measures related to treatment of waste (including article waste)

Waste treatment

External treatment and disposal of waste should comply with applicable local and/or national regulations.

4.2. CS2: Worker Contributing Scenario: Industrial (PROC1)

Process Categories	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid, vapour pressure > 10 kPa at STP	
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 Handle substance within a closed system. Ensure operation is undertaken outdoors.	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection Wear suitable gloves tested to EN374. Use eye protection according to EN 166.	
4.2. CS3: Worker Contributing Scenario: Industrial (PROC2)	
Process Categories	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid, vapour pressure > 10 kPa at STP	
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 Handle substance within a closed system. Ensure operation is undertaken outdoors.	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection Wear suitable gloves tested to EN374. Use eye protection according to EN 166.	
4.2. CS4: Worker Contributing Scenario: Industrial (PROC3)	
Process Categories	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>	
Physical form of product: Liquid, vapour pressure > 10 kPa at STP	
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	

Technical and organisational conditions and measures

Technical and organisational measures

Handle substance within a closed system.
Ensure operation is undertaken outdoors.

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

Personal protection

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

4.2. CS5: Worker Contributing Scenario: Industrial (PROC4)

Process Categories

Chemical production where opportunity for exposure arises (PROC4)

Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 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

Duration:

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Technical and organisational measures

Handle substance within a closed system.
Ensure operation is undertaken outdoors.

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

Personal protection

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

4.2. CS6: Worker Contributing Scenario: Industrial (PROC5, PROC8a)

Process Categories

Mixing or blending in batch processes - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC5, PROC8a)

Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 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

Duration:

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Technical and organisational measures

Handle substance within a closed system.
Ensure operation is undertaken outdoors.

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

Personal protection

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

4.2. CS7: Worker Contributing Scenario: Industrial (PROC7)

Process Categories

Industrial spraying (PROC7)

Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 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

Duration:

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Technical and organisational measures

Handle substance within a closed system.
Ensure operation is undertaken outdoors.
Fill containers/cans at dedicated fill points supplied with local extract ventilation.
Use of an integrated local exhaust ventilation is required.

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

Personal protection

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.
Wear a respirator conforming to EN140.

4.2. CS8: Worker Contributing Scenario: Industrial (PROC8b)

Process Categories

Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b)

Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 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

Duration:

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Technical and organisational measures

Handle substance within a closed system.
Ensure operation is undertaken outdoors.

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

Personal protection

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

4.2. CS9: Worker Contributing Scenario: Industrial (PROC9)

Process Categories

Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9)

Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 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

Duration:

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Technical and organisational measures

Handle substance within a closed system.
Ensure operation is undertaken outdoors.

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

Personal protection

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

4.2. CS10: Worker Contributing Scenario: Industrial (PROC10)

Process Categories

Roller application or brushing (PROC10)

Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 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

Duration:

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Technical and organisational measures

Handle substance within a closed system.
Ensure operation is undertaken outdoors.

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

Personal protection

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

4.2. CS11: Worker Contributing Scenario: Industrial (PROC13)

Process Categories

Treatment of articles by dipping and pouring (PROC13)

Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 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

Duration:

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Technical and organisational measures

Handle substance within a closed system.
Ensure operation is undertaken outdoors.

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

Personal protection

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

4.2. CS12: Worker Contributing Scenario: Industrial (PROC19)

Process Categories

Manual activities involving hand contact (PROC19)

Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 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

Duration:

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Technical and organisational measures

Handle substance within a closed system.
Ensure operation is undertaken outdoors.

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

Personal protection

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

4.3 Exposure estimation and reference to its source

4.3. CS2: Worker Contributing Scenario: Industrial (PROC1)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	0.01 ppm	ECETOC TRA worker v2.0	2E-05
dermal, systemic, long-term	0.34 mg/kg bw/day	ECETOC TRA worker v2.0	0.002

4.3. CS3: Worker Contributing Scenario: Industrial (PROC2)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	50 ppm	ECETOC TRA worker v2.0	0.1
dermal, systemic, long-term	1.37 mg/kg bw/day	ECETOC TRA worker v2.0	0.01

4.3. CS4: Worker Contributing Scenario: Industrial (PROC3)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	100 ppm	ECETOC TRA worker v2.0	0.2
dermal, systemic, long-term	0.34 mg/kg bw/day	ECETOC TRA worker v2.0	0.002

4.3. CS5: Worker Contributing Scenario: Industrial (PROC4)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	100 ppm	ECETOC TRA worker v2.0	0.2

dermal, systemic, long-term	6.86 mg/kg bw/day	ECETOC TRA worker v2.0	0.04
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4.3. CS6: Worker Contributing Scenario: Industrial (PROC5, PROC8a)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	250 ppm	ECETOC TRA worker v2.0	0.5
dermal, systemic, long-term	13.71 mg/kg bw/day	ECETOC TRA worker v2.0	0.07

4.3. CS7: Worker Contributing Scenario: Industrial (PROC7)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	350 ppm	ECETOC TRA worker v2.0	0.7
dermal, systemic, long-term	2.14 mg/kg bw/day	ECETOC TRA worker v2.0	0.01

4.3. CS8: Worker Contributing Scenario: Industrial (PROC8b)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	150 ppm	ECETOC TRA worker v2.0	0.3
dermal, systemic, long-term	6.86 mg/kg bw/day	ECETOC TRA worker v2.0	0.037

4.3. CS9: Worker Contributing Scenario: Industrial (PROC9)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	200 ppm	ECETOC TRA worker v2.0	0.4
dermal, systemic, long-term	6.86 mg/kg bw/day	ECETOC TRA worker v2.0	0.04

4.3. CS10: Worker Contributing Scenario: Industrial (PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	250 ppm	ECETOC TRA worker v2.0	0.5
dermal, systemic, long-term	27.43 mg/kg bw/day	ECETOC TRA worker v2.0	0.15

4.3. CS11: Worker Contributing Scenario: Industrial (PROC13)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
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inhalative, systemic, long-term	250 ppm	ECETOC TRA worker v2.0	0.5
dermal, systemic, long-term	13.71 mg/kg bw/day	ECETOC TRA worker v2.0	0.074

4.3. CS12: Worker Contributing Scenario: Industrial (PROC19)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	250 ppm	ECETOC TRA worker v2.0	0.5
dermal, systemic, long-term	28.29 mg/kg bw/day	ECETOC TRA worker v2.0	0.15

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	Cleaning agent
Date - Version	28/08/2019 - 1.0
Life Cycle Stage	Widespread use by professional workers
Main user group	Professional uses

Environment Contributing Scenario

CS1 Covered by	ERC8d
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Worker Contributing Scenario

CS2 General use from professional operators	PROC1
CS3 General use from professional operators	PROC2
CS4 General use from professional operators	PROC3
CS5 General use from professional operators	PROC4 - PROC8b - PROC9
CS6 General use from professional operators	PROC5 - PROC8a
CS7 General use from professional operators	PROC10
CS8 General use from professional operators	PROC11
CS9 General use from professional operators	PROC19

5.2 Conditions of use affecting exposure

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

Environmental release categories	Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d)
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Amount used, frequency and duration of use (or from service life)

Release type: Continuous release

Emission days: 360 days per year

Technical and organisational conditions and measures

Control measures to prevent releases

Treat air emission to provide the required removal efficiency of (%):	Air - minimum efficiency of: 90 %
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Conditions and measures related to treatment of waste (including article waste)

Waste treatment

External treatment and disposal of waste should comply with applicable local and/or national regulations.

5.2. CS2: Worker Contributing Scenario: General use from professional operators (PROC1)

Process Categories	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)
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Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 kPa at STP

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 Handle substance within a closed system.	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection Wear suitable gloves tested to EN374. Use eye protection according to EN 166.	
5.2. CS3: Worker Contributing Scenario: General use from professional operators (PROC2)	
Process Categories	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid, vapour pressure > 10 kPa at STP	
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 Handle substance within a closed system.	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection Wear suitable gloves tested to EN374. Use eye protection according to EN 166.	
5.2. CS4: Worker Contributing Scenario: General use from professional operators (PROC3)	
Process Categories	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>	
Physical form of product: Liquid, vapour pressure > 10 kPa at STP	
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 Handle substance within a closed system.	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection Wear suitable gloves tested to EN374. Use eye protection according to EN 166.	

5.2. CS5: Worker Contributing Scenario: General use from professional operators (PROC4, PROC8b, PROC9)

Process Categories

Chemical production where opportunity for exposure arises - Transfer of substance or mixture (charging and discharging) at dedicated facilities - Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC4, PROC8b, PROC9)

Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 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

Duration:

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Technical and organisational measures

Handle substance within a closed system.

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

Personal protection

Wear suitable gloves tested to EN374.

Use eye protection according to EN 166.

5.2. CS6: Worker Contributing Scenario: General use from professional operators (PROC5, PROC8a)

Process Categories

Mixing or blending in batch processes - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC5, PROC8a)

Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 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

Duration:

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures

Technical and organisational measures

Avoid carrying out activities involving exposure for more than 4 hours per day.

Ensure operation is undertaken outdoors.

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

Personal protection

Wear suitable gloves tested to EN374.

Use eye protection according to EN 166.

5.2. CS7: Worker Contributing Scenario: General use from professional operators (PROC10)

Process Categories

Roller application or brushing (PROC10)

Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 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

Duration:

Covers daily exposures up to 8 hours

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

Handle substance within a closed system.
Limit the substance content in the product to 25 %.
Avoid carrying out activities involving exposure for more than 4 hours per day.

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

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

5.2. CS8: Worker Contributing Scenario: General use from professional operators (PROC11)**Process Categories**

Non industrial spraying (PROC11)

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

Liquid, vapour pressure > 10 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**Duration:**

Covers daily exposures up to 8 hours

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

Handle substance within a closed system.
Avoid carrying out activities involving exposure for more than 1 hour per day.

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

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.
Wear a respirator conforming to EN140.

5.2. CS9: Worker Contributing Scenario: General use from professional operators (PROC19)**Process Categories**

Manual activities involving hand contact (PROC19)

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

Liquid, vapour pressure > 10 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**Duration:**

Covers daily exposures up to 8 hours

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

Handle substance within a closed system.
Avoid carrying out activities involving exposure for more than 1 hour per day.
Limit the substance content in the product to 25 %.

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

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.

Wear a respirator conforming to EN140.

5.3 Exposure estimation and reference to its source

5.3. CS2: Worker Contributing Scenario: General use from professional operators (PROC1)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	0.01 ppm	ECETOC TRA worker v2.0	2E-05
dermal, systemic, long-term	0.34 mg/kg bw/day	ECETOC TRA worker v2.0	0.002

5.3. CS3: Worker Contributing Scenario: General use from professional operators (PROC2)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	50 ppm	ECETOC TRA worker v2.0	0.1
dermal, systemic, long-term	1.37 mg/kg bw/day	ECETOC TRA worker v2.0	0.01

5.3. CS4: Worker Contributing Scenario: General use from professional operators (PROC3)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	100 ppm	ECETOC TRA worker v2.0	0.2
dermal, systemic, long-term	0.34 mg/kg bw/day	ECETOC TRA worker v2.0	0.002

5.3. CS5: Worker Contributing Scenario: General use from professional operators (PROC4, PROC8b, PROC9)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	250 ppm	ECETOC TRA worker v2.0	0.5
dermal, systemic, long-term	6.86 mg/kg bw/day	ECETOC TRA worker v2.0	0.04

5.3. CS6: Worker Contributing Scenario: General use from professional operators (PROC5, PROC8a)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	100 ppm	ECETOC TRA worker v2.0	0.2
dermal, systemic, long-term	13.71 mg/kg bw/day	ECETOC TRA worker v2.0	0.07

5.3. CS7: Worker Contributing Scenario: General use from professional operators (PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
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inhalative, systemic, long-term	100 ppm	ECETOC TRA worker v2.0	0.2
dermal, systemic, long-term	27.43 mg/kg bw/day	ECETOC TRA worker v2.0	0.15

5.3. CS8: Worker Contributing Scenario: General use from professional operators (PROC11)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	300 ppm	ECETOC TRA worker v2.0	0.6
dermal, systemic, long-term	107.14 mg/kg bw/day	ECETOC TRA worker v2.0	0.58

5.3. CS9: Worker Contributing Scenario: General use from professional operators (PROC19)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	300 ppm	ECETOC TRA worker v2.0	0.6
dermal, systemic, long-term	16.97 mg/kg bw/day	ECETOC TRA worker v2.0	0.09

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 (PC9b, PC9a, PC3, PC4, PC24)

6.1 TITLE SECTION

Exposure Scenario name	Cleaning agent
Date - Version	28/08/2019 - 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) - Air care products (PC3) - Anti-freeze and de-icing products (PC4) - Lubricants, greases, release products (PC24) - Polymer preparations and compounds (PC32) - Washing and cleaning products (PC35) - Welding and soldering products, flux products (PC38)

Environment Contributing Scenario

CS1 Covered by	ERC8d
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Consumer Contributing Scenario

CS2 Consumer	PC3
CS3 Consumer	PC3
CS4 Consumer	PC4
CS5 Consumer	PC4
CS6 Consumer	PC4
CS7 Consumer	PC9a
CS8 Consumer	PC9a
CS9 Consumer	PC9a
CS10 Consumer	PC9a
CS11 Consumer	PC9b
CS12 Consumer	PC9b
CS13 Consumer	PC9b
CS14 Consumer	PC9c
CS15 Consumer	PC24
CS16 Consumer	PC24
CS17 Consumer	PC24
CS18 Consumer	PC35
CS19 Consumer	PC35
CS20 Consumer	PC38

6.2 Conditions of use affecting exposure

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

Environmental release	Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
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categories	(ERC8d)
<i>Amount used, frequency and duration of use (or from service life)</i>	
Release type: Continuous release	
Emission days: 360 days per year	
<i>Conditions and measures related to treatment of waste (including article waste)</i>	
Waste treatment External treatment and disposal of waste should comply with applicable local and/or national regulations.	
6.2. CS2: Consumer Contributing Scenario: Consumer (PC3)	
Product Categories	Air care products (PC3)
<i>Product (article) characteristics</i>	
Physical form of product: Aerosol	
Concentration of substance in product: Covers concentrations up to 50 %	
<i>Amount used, frequency and duration of use/exposure</i>	
Amounts used: Amount per use 0.1 g	
Duration: Exposure duration 0.25 h	
Frequency: Covers exposure up to 365 days per year	
<i>Other conditions affecting consumers exposure</i>	
Room size: Covers use in room size of 20 m ³	
Temperature: Covers use at ambient temperatures.	
Ventilation rate: Covers use under typical household ventilation.	
Additional conditions human health Covers skin contact area up to 6600 cm ²	
6.2. CS3: Consumer Contributing Scenario: Consumer (PC3)	
Product Categories	Air care products (PC3)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid	
Vapour pressure: 240 hPa	
Concentration of substance in product: Covers percentage substance in the product up to 1 %.	
<i>Amount used, frequency and duration of use/exposure</i>	
Amounts used: Amount per use 0.48 g	
Duration: Exposure duration 8 h	
Frequency: Covers exposure up to 365 days per year	

Other conditions affecting consumers exposure

Room size: Covers use in room size of 20 m³

Temperature: Covers use at ambient temperatures.

Ventilation rate: Covers use under typical household ventilation.

Additional conditions human health

Covers skin contact area up to 35.7 cm²

6.2. CS4: Consumer Contributing Scenario: Consumer (PC4)

Product Categories	Anti-freeze and de-icing products (PC4)
---------------------------	---

Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers percentage substance in the product up to 1 %.

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 0.5 g

Duration:

Exposure duration 0.02 h

Frequency:

Covers exposure up to 365 days per year

Other conditions affecting consumers exposure

Room size: Covers use in a one car garage (>34 m³) under typical ventilation.

6.2. CS5: Consumer Contributing Scenario: Consumer (PC4)

Product Categories	Anti-freeze and de-icing products (PC4)
---------------------------	---

Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 10 %

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 2400 g

Duration:

Exposure duration 0.17 h

Frequency:

Covers exposure up to 365 days per year

Other conditions affecting consumers exposure

Room size: Covers use in a one car garage (>34 m³) under typical ventilation.

Additional conditions human health

Covers skin contact area up to 428 cm²

6.2. CS6: Consumer Contributing Scenario: Consumer (PC4)

Product Categories Anti-freeze and de-icing products (PC4)

Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 50 %

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 4 g

Duration:

Exposure duration 0.25 h

Frequency:

Covers exposure up to 365 days per year

Other conditions affecting consumers exposure

Room size: Covers use in a one car garage (>34 m³) under typical ventilation.

Additional conditions human health

Covers skin contact area up to 214.4 cm²

6.2. CS7: Consumer Contributing Scenario: Consumer (PC9a)

Product Categories Coatings and paints, thinners, paint removers (PC9a)

Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 1.5 %

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 2760 g

Duration:

Exposure duration 2.2 h

Frequency:

Covers exposure up to 4 days per year

Other conditions affecting consumers exposure

Room size: Covers use in room size of 20 m³

Temperature: Covers use at ambient temperatures.

Ventilation rate: Covers use under typical household ventilation.

Additional conditions human health

Covers skin contact area up to 428.75 cm²

6.2. CS8: Consumer Contributing Scenario: Consumer (PC9a)

Product Categories	Coatings and paints, thinners, paint removers (PC9a)
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Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 27.5 %

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 744 g

Duration:

Exposure duration 2.2 h

Frequency:

Covers exposure up to 6 days per year

Other conditions affecting consumers exposure

Room size: Covers use in room size of 20 m³

Temperature: Covers use at ambient temperatures.

Ventilation rate: Covers use under typical household ventilation.

Additional conditions human health

Covers skin contact area up to 428.75 cm²

6.2. CS9: Consumer Contributing Scenario: Consumer (PC9a)

Product Categories	Coatings and paints, thinners, paint removers (PC9a)
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Product (article) characteristics

Physical form of product:

Aerosol

Concentration of substance in product:

Covers concentrations up to 50 %

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 215 g

Duration:

Exposure duration 0.33 min

Frequency:

Covers exposure up to 2 days per year

Other conditions affecting consumers exposure

Room size: Covers use in a one car garage (>34 m³) under typical ventilation.

Additional conditions human health

Covers skin contact area up to 6600 cm²

6.2. CS10: Consumer Contributing Scenario: Consumer (PC9a)

Product Categories	Coatings and paints, thinners, paint removers (PC9a)
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Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 50 %

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

Amount per use 491 g

Duration:

Exposure duration 2 h

Frequency:

Covers exposure up to 3 days per year

*Other conditions affecting consumers exposure***Room size:** Covers use in room size of 20 m³**Temperature:** Covers use at ambient temperatures.**Ventilation rate:** Covers use under typical household ventilation.**Additional conditions human health**Covers skin contact area up to 857.5 cm²**6.2. CS11: Consumer Contributing Scenario: Consumer (PC9b)****Product Categories**

Fillers, putties, plasters, modelling clay (PC9b)

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

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 2 %

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

Amount per use 85 g

Duration:

Exposure duration 4 h

Frequency:

Covers exposure up to 12 days per year

*Other conditions affecting consumers exposure***Room size:** Covers use in room size of 20 m³**Temperature:** Covers use at ambient temperatures.**Ventilation rate:** Covers use under typical household ventilation.**Additional conditions human health**Covers skin contact area up to 35.73 cm²**6.2. CS12: Consumer Contributing Scenario: Consumer (PC9b)****Product Categories**

Fillers, putties, plasters, modelling clay (PC9b)

Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 2 %

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

Amount per use 13800 g

Duration:

Exposure duration 2 h

Frequency:

Covers exposure up to 12 days per year

*Other conditions affecting consumers exposure***Room size:** Covers use in room size of 20 m³**Temperature:** Covers use at ambient temperatures.**Ventilation rate:** Covers use under typical household ventilation.**Additional conditions human health**Covers skin contact area up to 857.5 cm²**6.2. CS13: Consumer Contributing Scenario: Consumer (PC9b)****Product Categories**

Fillers, putties, plasters, modelling clay (PC9b)

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

Solid in solution

Concentration of substance in product:

Covers percentage substance in the product up to 1 %.

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

Amount per use 1 g

Duration:

Exposure duration 8 h

Frequency:

Covers exposure up to 365 days per year

*Other conditions affecting consumers exposure***Room size:** Covers use in room size of 20 m³**Temperature:** Covers use at ambient temperatures.**Ventilation rate:** Covers use under typical household ventilation.**Additional conditions human health**Covers skin contact area up to 254.4 cm²**6.2. CS14: Consumer Contributing Scenario: Consumer****Product (Sub-)Categories**

Finger paints (PC9c)

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

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 50 %

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

Amount per use 1.35 g

Duration:

Exposure duration 8 h

Frequency:

Covers exposure up to 365 days per year

Other conditions affecting consumers exposure**Room size:** Covers use in room size of 20 m³**Temperature:** Covers use at ambient temperatures.**Ventilation rate:** Covers use under typical household ventilation.**Additional conditions human health**Covers skin contact area up to 254.4 cm²

Avoid using at a product concentration greater than 5 %

6.2. CS15: Consumer Contributing Scenario: Consumer (PC24)**Product Categories**

Lubricants, greases, release products (PC24)

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

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

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

Amount per use 2200 g

Duration:

Exposure duration 0.17 h

Frequency:

Covers exposure up to 4 days per year

Other conditions affecting consumers exposure**Room size:** Covers use in a one car garage (>34 m³) under typical ventilation.**Additional conditions human health**Covers skin contact area up to 468 cm²**6.2. CS16: Consumer Contributing Scenario: Consumer (PC24)****Product Categories**

Lubricants, greases, release products (PC24)

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

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 20 %

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 34 g

Duration:

Exposure duration 8 h

Frequency:

Covers exposure up to 10 days per year

Other conditions affecting consumers exposure

Room size: Covers use in room size of 20 m³

Temperature: Covers use at ambient temperatures.

Ventilation rate: Covers use under typical household ventilation.

Additional conditions human health

Covers skin contact area up to 468 cm²

6.2. CS17: Consumer Contributing Scenario: Consumer (PC24)

Product Categories

Lubricants, greases, release products (PC24)

Product (article) characteristics

Physical form of product:

Aerosol

Concentration of substance in product:

Covers concentrations up to 50 %

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 73 g

Duration:

Exposure duration 0.17 h

Frequency:

Covers exposure up to 6 days per year

Other conditions affecting consumers exposure

Room size: Covers use in room size of 20 m³

Temperature: Covers use at ambient temperatures.

Ventilation rate: Covers use under typical household ventilation.

Additional conditions human health

Covers skin contact area up to 428.75 cm²

6.2. CS18: Consumer Contributing Scenario: Consumer (PC35)

Product Categories

Washing and cleaning products (PC35)

Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers percentage substance in the product up to 5 %.

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 15 g

Duration:

Exposure duration 0.5 h

Frequency:

Covers exposure up to 365 days per year

Other conditions affecting consumers exposure

Room size: Covers use in room size of 20 m³

Temperature: Covers use at ambient temperatures.

Ventilation rate: Covers use under typical household ventilation.

Additional conditions human health

Covers skin contact area up to 857.5 cm²

6.2. CS19: Consumer Contributing Scenario: Consumer (PC35)

Product Categories

Washing and cleaning products (PC35)

Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers percentage substance in the product up to 5 %.

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 27 g

Duration:

Exposure duration 0.33 h

Frequency:

Covers exposure up to 128 days per year

Other conditions affecting consumers exposure

Room size: Covers use in room size of 20 m³

Temperature: Covers use at ambient temperatures.

Ventilation rate: Covers use under typical household ventilation.

Additional conditions human health

Covers skin contact area up to 857.5 cm²

6.2. CS20: Consumer Contributing Scenario: Consumer (PC38)

Product Categories

Welding and soldering products, flux products (PC38)

Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

240 hPa

Concentration of substance in product:

Covers concentrations up to 20 %

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 12 g

Duration:

Exposure duration 1 h

Frequency:

Covers exposure up to 365 days per year

Other conditions affecting consumers exposure

Room size: Covers use in room size of 20 m³

Temperature: Covers use at ambient temperatures.

Ventilation rate: Covers use under typical household ventilation.

Additional conditions human health

Covers skin contact area up to 6600 cm²

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.

Exposure Scenario, 03/09/2019

Substance identity	
Chemical name	Propano
CAS No.	74-98-6
EINECS No.	200-827-9

Table of contents

1. **ES 1** Use at industrial site

1. ES 1 Use at industrial site

1.1 TITLE SECTION

Exposure Scenario name	Use as a propellant
Date - Version	03/09/2019 - 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
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Worker Contributing Scenario

CS2 Propellant	PROC1 - PROC2 - PROC3 - PROC8b - PROC9 - PROC12
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1.2 Conditions of use affecting exposure

1.2. 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)
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1.2. CS2: Worker Contributing Scenario: Propellant (PROC1, PROC2, PROC3, PROC8b, PROC9, PROC12)

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 - Transfer of substance or mixture (charging and discharging) at dedicated facilities - Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - Use of blowing agents in manufacture of foam (PROC1, PROC2, PROC3, PROC8b, PROC9, PROC12)
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Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

> 10 kPa

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

Technical and organisational conditions and measures

Technical and organisational measures

- Keep drains in watertight containers while awaiting dismantling or subsequent recycling
- Use in contained systems
- Ensure operatives are trained to minimise exposures.
- Ensure that direct skin contact is avoided.
- Clear transfer lines prior to de-coupling.
- Provide a good standard of controlled ventilation (10 to 15 air changes per hour).
- Drain down and flush system prior to equipment break-in or maintenance.

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

Personal protection

Wear suitable respiratory protection.

Other conditions affecting worker exposure

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

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.