

Ficha de datos de seguridad

RESINA E INSETTI



Ficha de datos de seguridad del 16/9/2024, Revisión 12

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: RESINA E INSETTI

Código comercial: 8356

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

Uso recomendado:

Producto para eliminar resinas e insectos

Usos no recomendados:

Respetar estrictamente los usos recomendados.

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

Proveedor:

Arexons S.p.A.

via Antica di Cassano, 23, 20063

Cernusco sul Naviglio (MI), Italy

Arexons S.p.A.

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

Persona competente responsable de la ficha de datos de seguridad:

arexons@arexons.it

1.4. Teléfono de emergencia

Arexons S.p.A.

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

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

SECCIÓN 2. Identificación de los peligros

2.1. Clasificación de la sustancia o de la mezcla

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

El producto no se considera peligroso de acuerdo con el Reglamento CE 1272/2008 (CLP).

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

Ningún otro riesgo

2.2. Elementos de la etiqueta

El producto no se considera peligroso de acuerdo con el Reglamento CE 1272/2008 (CLP).

Pictogramas de peligro:

Ninguna

Indicaciones de peligro:

Ninguna

Consejos de prudencia:

Ninguna

Disposiciones especiales:

Ninguna

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:

Fosfatos, Tensioactivos aniónicos, Tensioactivos anfotéricos < 5 %

Contiene también: Perfumes

Alérgenos: Citral, (R)-p-Menta-1,8-dieno; d-limoneno

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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
$\geq 7\%$ - $< 10\%$	alcohol etílico	CAS: 64-17-5 EC: 200-578-6 REACH No.: 01-2119457610-43	⚠ 2.6/2 Flam. Liq. 2 H225 ⚠ 3.3/2 Eye Irrit. 2 H319 Límites de concentración específicos: C $\geq 50\%$: Eye Irrit. 2 H319
$\geq 3\%$ - $< 5\%$	3-Butoxiopropan-2-ol; éter monobutílico de propilenglicol	Número 603-052-00-8 Index: CAS: 5131-66-8 EC: 225-878-4 REACH No.: 01-2119475527-28	⚠ 3.2/2 Skin Irrit. 2 H315 ⚠ 3.3/2 Eye Irrit. 2 H319 Estimación de la toxicidad aguda: ETA - Oral 3300 mg/kg pc ETA - Cutánea 2000 mg/kg pc
$\geq 1\%$ - $< 2\%$	1-Metoxi-2-propanol; éter monometílico de propilenglicol	Número 603-064-00-3 Index: CAS: 107-98-2 EC: 203-539-1 REACH No.: 01-2119457435-35	⚠ 2.6/3 Flam. Liq. 3 H226 ⚠ 3.8/3 STOT SE 3 H336
$\geq 1\%$ - $< 2\%$	Alcohols, C12-14, ethoxylated, sulfates, sodium salts 1-2,5 moles ethoxylated	CAS: 68891-38-3 EC: 500-234-8 REACH No.: 01-2119488639-16	⚠ 3.3/1 Eye Dam. 1 H318 ⚠ 3.2/2 Skin Irrit. 2 H315 4.1/C3 Aquatic Chronic 3 H412 Límites de concentración específicos: 5% $\leq$ C $< 10\%$: Eye Irrit. 2 H319 C $\geq 10\%$: Eye Dam. 1 H318
$\geq 0,005\%$ - $< 0,01\%$	p-Mentha-1,4(8)-diene TERPINOLENE	CAS: 586-62-9 EC: 209-578-0	El producto no se considera peligroso de acuerdo con el Reglamento CE 1272/2008 (CLP).

SECCIÓN 4. Primeros auxilios

4.1. Descripción de los primeros auxilios

En caso de contacto con la piel:

Lavar abundantemente con agua y jabón.

En caso de contacto con los ojos:

En caso de contacto con los ojos, lávense inmediata y abundantemente con agua y acúdase a un médico.

En caso de ingestión:

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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

Tratamiento:

Ninguno

SECCIÓN 5. Medidas de lucha contra incendios

5.1. Medios de extinción

Medios de extinción apropiados:

Con anhídrido carbónico.

Con polvo.

Espuma

Agua vaporizada.

Medios de extinción no recomendados:

No usar chorros de agua directos

5.2. Peligros específicos derivados de la sustancia o la mezcla

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

La combustión produce humo pesado.

5.3. Recomendaciones para el personal de lucha contra incendios

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

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.

Llevar las personas a un lugar seguro.

Consultar las medidas de protección expuestas en los puntos 7 y 8.

6.2. Precauciones relativas al medio ambiente

Evitar que el producto penetre en el suelo/subsuelo. Evitar que penetre en aguas superficiales o en el alcantarillado.

Conservar el agua de lavado contaminada y eliminarla.

En caso de fuga de gas o penetración en cursos de agua, suelo o sistema de alcantarillado, informar a las autoridades responsables.

Material apropiado para la recogida: material absorbente, orgánico, arena

6.3. Métodos y material de contención y de limpieza

Limpieza:

Evitar la presencia de llamas y/o chispas cerca de la pérdida y productos de desecho. No fumar.

Contener

en caso de vertido de cantidades relevantes del producto y absorber cuando disperse. Contener el

derrame de pequeñas cantidades de producto con tierra, arena, sepiolita, trapos u otro absorbente inerte.

Recuperar con paletas después de la absorción de disolvente y transferir en contenedores adecuados.

Desechar los residuos según la normativa vigente.

6.4. Referencia a otras secciones

Véanse también los apartados 8 y 13.

SECCIÓN 7. Manipulación y almacenamiento

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- 7.1. Precauciones para una manipulación segura
Evitar el contacto con la piel y los ojos, la inhalación de vapores y vahos.
Remitirse también al apartado 8 para los dispositivos de protección recomendados.
- No comer ni beber durante el trabajo.
- 7.2. Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades
Conservar solo en el recipiente original.
Mantener alejado de comidas, bebidas y piensos.
Ninguna en particular.
Indicaciones para los locales:
Locales adecuadamente aireados.
- 7.3. Usos específicos finales
Ningún uso particular

SECCIÓN 8. Controles de exposición/protección individual

- 8.1. Parámetros de control
alcohol etílico - CAS: 64-17-5
ACGIH - STEL: 1000 ppm - Notas: A3 - URT irr
- 1-Metoxi-2-propanol; éter monometílico de propilenglicol - CAS: 107-98-2
UE - TWA(8h): 375 mg/m³, 100 ppm - STEL: 563 mg/m³, 150 ppm - Notas: Skin
ACGIH - TWA(8h): 50 ppm - STEL: 100 ppm - Notas: A4 - Eye and URT irr
- Valores límites de exposición DNEL
alcohol etílico - CAS: 64-17-5
Trabajador profesional: 1900 mg/m³ - Exposición: Por inhalación humana - Frecuencia: A corto plazo (aguda)
Trabajador profesional: 950 mg/m³ - Exposición: Por inhalación humana - Frecuencia: A largo plazo, efectos sistémicos
Trabajador profesional: 343 mg/kg - Exposición: Dérmica humana - Frecuencia: A largo plazo, efectos sistémicos
- 3-Butoxipropan-2-ol; éter monobutílico de propilenglicol - CAS: 5131-66-8
Trabajador profesional: 44 mg/kg - Consumidor: 16 mg/kg - Exposición: Dérmica humana - Frecuencia: A largo plazo, efectos sistémicos
Trabajador profesional: 270.5 mg/m³ - Consumidor: 33.8 mg/m³ - Exposición: Por inhalación humana - Frecuencia: A largo plazo, efectos sistémicos
Consumidor: 8.75 mg/kg - Exposición: Oral humana - Frecuencia: A largo plazo, efectos sistémicos
- 1-Metoxi-2-propanol; éter monometílico de propilenglicol - CAS: 107-98-2
Consumidor: 33 mg/kg - Exposición: Oral humana - Frecuencia: A largo plazo, efectos sistémicos
Trabajador industrial: 369 mg/m³ - Trabajador profesional: 369 mg/m³ - Consumidor: 43.9 mg/m³ - Exposición: Por inhalación humana - Frecuencia: A largo plazo, efectos sistémicos
Trabajador industrial: 183 mg/kg - Trabajador profesional: 183 mg/kg - Consumidor: 78 mg/kg - Exposición: Dérmica humana - Frecuencia: A largo plazo, efectos sistémicos
Trabajador industrial: 553.5 mg/m³ - Trabajador profesional: 553.5 mg/m³ - Exposición: Por inhalación humana - Frecuencia: A corto plazo, efectos locales
Trabajador industrial: 553.5 mg/m³ - Trabajador profesional: 553.5 mg/m³ - Exposición: Por inhalación humana - Frecuencia: A corto plazo, efectos sistémicos
- Alcohols, C12-14, ethoxylated, sulfates, sodium salts 1-2,5 moles ethoxylated - CAS: 68891-38-3
Consumidor: 15 mg/kg - Exposición: Oral humana - Frecuencia: A largo plazo, efectos sistémicos
Trabajador profesional: 175 mg/m³ - Consumidor: 52 mg/m³ - Exposición: Por inhalación humana - Frecuencia: A largo plazo, efectos sistémicos
Trabajador profesional: 2750 mg/kg - Consumidor: 1650 mg/kg - Exposición: Dérmica humana - Frecuencia: A largo plazo, efectos sistémicos
Trabajador profesional: 0.132 03 - Consumidor: 0.079 03 - Exposición: Dérmica humana -

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Frecuencia: A largo plazo, efectos locales

Valores límites de exposición PNEC

alcohol etílico - CAS: 64-17-5

Objetivo: agua dulce - Valor: 0.96 mg/l

Objetivo: Agua marina - Valor: 0.79 mg/l

Objetivo: Sedimentos de agua dulce - Valor: 3.6 mg/kg

Objetivo: Sedimentos de agua marina - Valor: 2.9 mg/kg

Objetivo: 09 - Valor: 580 mg/l

3-Butoxiopropan-2-ol; éter monobutílico de propilenglicol - CAS: 5131-66-8

Objetivo: agua dulce - Valor: 0.525 mg/l

Objetivo: Agua marina - Valor: 0.0525 mg/l

Objetivo: 09 - Valor: 10 mg/l

Objetivo: Sedimentos de agua dulce - Valor: 2.36 mg/kg

Objetivo: Sedimentos de agua marina - Valor: 0.236 mg/kg

1-Metoxi-2-propanol; éter monometílico de propilenglicol - CAS: 107-98-2

Objetivo: agua dulce - Valor: 10 mg/l

Objetivo: Sedimentos de agua dulce - Valor: 52.3 mg/kg

Objetivo: Sedimentos de agua marina - Valor: 5.2 mg/kg

Objetivo: Agua marina - Valor: 1 mg/l

Objetivo: 09 - Valor: 100 mg/l

Alcohols, C12-14, ethoxylated, sulfates, sodium salts 1-2,5 moles ethoxylated - CAS: 68891-38-3

Objetivo: agua dulce - Valor: 0.24 mg/l

Objetivo: Agua marina - Valor: 0.024 mg/l

Objetivo: Sedimentos de agua dulce - Valor: 0.917 mg/kg

Objetivo: Sedimentos de agua marina - Valor: 0.092 mg/kg

Objetivo: 09 - Valor: 10000 mg/l

8.2. Controles de la exposición

Protección de los ojos:

Gafas con protección lateral.

Cumple con la norma EN 166

Protección de la piel:

No se requiere ninguna precaución especial para el uso normal.

Protección de las manos:

Guantes de nitrilo o de Viton.

Conformes EN 374.

Grosor: Puño 0,10 mm; palma 0,12 mm; dedos 0,145 mm

Protección respiratoria:

Use un dispositivo de protección respiratoria adecuado.

Riesgos térmicos:

Ninguno

Controles de la exposición ambiental:

Ninguno

Controles técnicos apropiados:

Ninguno

SECCIÓN 9. Propiedades físicas y químicas

9.1. Información sobre propiedades físicas y químicas básicas

Propiedad	Valor	Método:	Notas
Estado físico:	Líquido	--	--
Color:	amarillo	--	--
Olor:	característico	--	--
Punto de fusión/punto de	N.A.	--	--

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congelación:			
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.	--	--
Punto de ignición (flash point, fp):	44,5°C	Regulation (EC) No. 440/2008, Annex, A.9	todo lo indicado en la Sección 14 de la FDS se refiere a la exención según el ADR para los líquidos inflamables viscosos, que cumplen con los criterios del apartado 2.2.3.1.5. ADR
Temperatura de autoencendido:	N.A.	--	--
Temperatura de descomposición:	N.A.	--	--
pH:	10.6	ASTM D1287	--
Viscosidad cinemática:	> 20,5 mm ² /sec (40 °C)	--	--
Hidrosolubilidad:	N.A.	--	--
Solubilidad en aceite:	N.A.	--	--
Coeficiente de reparto n-octanol/agua (valor logarítmico):	N.A.	--	--
Presión de vapor:	N.A.	--	--
Densidad y/o densidad relativa:	0,993 g/cm ³	09	--
Densidad de vapor relativa:	N.A.	--	--
Características de las partículas:			
Tamaño de las partículas:	N.A.	--	--

9.2. Otros datos

Propiedad	Valor	Método:	Notas
Viscosidad:	58 cP	Brookfield (G2 V50)	--

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SECCIÓN 10. Estabilidad y reactividad

- 10.1. Reactividad
Estable en condiciones normales
- 10.2. Estabilidad química
Estable a las temperaturas ambiente normales y si se usa como está recomendado.
- 10.3. Posibilidad de reacciones peligrosas
Ninguno
- 10.4. Condiciones que deben evitarse
Estable en condiciones normales.
- 10.5. Materiales incompatibles
Ninguna en particular.
- 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
No clasificado
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- b) corrosión o irritación cutáneas
No clasificado
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- c) lesiones o irritación ocular graves
No clasificado
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- d) sensibilización respiratoria o cutánea
No clasificado
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- e) mutagenicidad en células germinales
No clasificado
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- f) carcinogenicidad
No clasificado
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- g) toxicidad para la reproducción
No clasificado
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- h) toxicidad específica en determinados órganos (STOT) – exposición única
No clasificado
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- i) toxicidad específica en determinados órganos (STOT) – exposición repetida
No clasificado
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- j) peligro de aspiración
No clasificado
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

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

- alcohol etílico - CAS: 64-17-5
- d) sensibilización respiratoria o cutánea:
Ensayo: Sensibilización de la piel - Vía: Piel Negativo
- e) mutagenicidad en células germinales:
Ensayo: Genotoxicidad - Especies: vitro Negativo
- f) carcinogenicidad:
Ensayo: Carcinogenicidad - Especies: mam Positivo
- g) toxicidad para la reproducción:

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- Ensayo: NOAEL - Vía: Inhalación - Especies: Rata = 1600 ppm
3-Butoxiopropan-2-ol; éter monobutílico de propilenglicol - CAS: 5131-66-8
- a) toxicidad aguda
ETA - Oral 3300 mg/kg pc
ETA - Cutánea 2000 mg/kg pc
Ensayo: LD50 - Vía: Oral - Especies: Rata 3300 mg/kg
Ensayo: LD50 - Vía: Piel - Especies: Rata > 2000 mg/kg
- b) corrosión o irritación cutáneas:
Positivo
- c) lesiones o irritación ocular graves:
Positivo
- d) sensibilización respiratoria o cutánea:
Negativo
- e) mutagenicidad en células germinales:
Negativo
- f) carcinogenicidad:
Negativo
- g) toxicidad para la reproducción:
Negativo
- 1-Metoxi-2-propanol; éter monometílico de propilenglicol - CAS: 107-98-2
- a) toxicidad aguda:
Ensayo: LD50 - Vía: Oral - Especies: Rata = 4016 mg/kg
Ensayo: LD50 - Vía: Piel - Especies: Rata > 2000 mg/kg
Ensayo: LC50 - Vía: Inhalación - Especies: Rata > 25.8 mg/l - Duración: 6h
- Alcohols, C12-14, ethoxylated, sulfates, sodium salts 1-2,5 moles ethoxylated - CAS: 68891-38-3
- a) toxicidad aguda:
Ensayo: LD50 - Vía: Oral > 2870 mg/kg
Ensayo: LD50 - Vía: Piel > 2000 mg/kg
- p-Mentha-1,4(8)-diene TERPINOLENE - CAS: 586-62-9
- a) toxicidad aguda:
Ensayo: LD50 - Vía: Piel > 5000 mg/kg
Ensayo: LD50 - Vía: Oral = 3850 mg/kg
Ensayo: LC50 - Vía: Inhalación > 100 mg/l

- 11.2. Información relativa a otros peligros
Propiedades de alteración endocrina:
Ningún perturbador endocrino presente en concentración $\geq 0.1\%$

SECCIÓN 12. Información ecológica

- 12.1. Toxicidad
Utilícese con técnicas de trabajo adecuadas, evitando la dispersión del producto en el medio ambiente.
alcohol etílico - CAS: 64-17-5
- a) Toxicidad acuática aguda:
Parámetro: LC50 - Especies: Peces 14.2 GL - Duración h.: 96
Parámetro: LC50 - Especies: Daphnia 29.6 GL - Duración h.: 24
Parámetro: EC50 - Especies: Algas 19000 mg/l - Duración h.: 96
Parámetro: EC50 - Especies: batteri 39.5 GL - Duración h.: 4
- b) Toxicidad acuática crónica:
Parámetro: EC50 - Especies: Peces 14536 mg/l - Duración h.: 200
Parámetro: LC50 - Especies: Daphnia 9248 mg/l - Duración h.: 48
- 3-Butoxiopropan-2-ol; éter monobutílico de propilenglicol - CAS: 5131-66-8
- a) Toxicidad acuática aguda:
Parámetro: LC50 - Especies: Peces > 560 mg/l - Duración h.: 96
Parámetro: EC50 - Especies: Daphnia > 1000 mg/l - Duración h.: 48
Parámetro: EC50 - Especies: Algas > 1000 mg/l - Duración h.: 96

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- Parámetro: EC50 - Especies: fanghi > 1000 mg/l - Duración h.: 3
- b) Toxicidad acuática crónica:
Parámetro: NOEC - Especies: Algas 560 mg/l - Duración h.: 96
1-Metoxi-2-propanol; éter monometílico de propilenglicol - CAS: 107-98-2
- a) Toxicidad acuática aguda:
Parámetro: EC50 - Especies: Algas > 1000 mg/l - Duración h.: 72
Parámetro: EC50 - Especies: Daphnia > 21100 mg/l - Duración h.: 48 - Notas: 21100-25900 mg/l
Parámetro: EC50 - Especies: Peces = 6812 mg/l - Duración h.: 96
Alcohols, C12-14, ethoxylated, sulfates, sodium salts 1-2,5 moles ethoxylated - CAS: 68891-38-3
- a) Toxicidad acuática aguda:
Parámetro: LC50 - Especies: Peces 7.1 mg/l - Duración h.: 96
Parámetro: EC50 - Especies: Daphnia 7.4 mg/l - Duración h.: 48
Parámetro: EC50 - Especies: Algas 27.7 mg/l - Duración h.: 72
- b) Toxicidad acuática crónica:
Parámetro: NOEC - Especies: Peces 0.14 mg/l - Duración h.: 672
Parámetro: NOEC - Especies: Daphnia 0.27 mg/l - Duración h.: 504
Parámetro: NOEC - Especies: Algas 0.95 mg/l - Duración h.: 72
- 12.2. Persistencia y degradabilidad
Ninguno
3-Butoxiopropan-2-ol; éter monobutílico de propilenglicol - CAS: 5131-66-8
Biodegradabilidad: Rápidamente degradable - Ensayo: BIOGDG12 - Duración h.: 28gg - %: 90
1-Metoxi-2-propanol; éter monometílico de propilenglicol - CAS: 107-98-2
Biodegradabilidad: Biodegradable - Ensayo: BIOGDG12 - Duración h.: 28gg - %: 96
Alcohols, C12-14, ethoxylated, sulfates, sodium salts 1-2,5 moles ethoxylated - CAS: 68891-38-3
Biodegradabilidad: Rápidamente degradable
- 12.3. Potencial de bioacumulación
3-Butoxiopropan-2-ol; éter monobutílico de propilenglicol - CAS: 5131-66-8
Bioacumulación: No bioacumulable
1-Metoxi-2-propanol; éter monometílico de propilenglicol - CAS: 107-98-2
Ensayo: Kow - Coeficiente de reparto -0.43
- 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. Operar conforme con las disposiciones locales y nacionales vigentes.
Información adicional sobre eliminación:
"Utilice el producto según las buenas prácticas de trabajo, evitando la dispersión en el medio ambiente.
No descargue en alcantarillados, canales o cursos de agua. Respete la legislación vigente en materia de protección del agua y el suelo contra la contaminación (Decreto Legislativo n.º 152 del 3/4/2006).
Elimine el producto y los envases usados entregándolos a empresas autorizadas, de acuerdo con lo establecido en el Decreto Legislativo n.º 152/2006 (Texto Refundido de la Ley de Medio Ambiente, que sustituyó al Decreto Ronchi) en su versión modificada.
El producto usado debe considerarse residuo especial que debe clasificarse de acuerdo con la

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Directiva n.º 2008/98/CE sobre residuos y asuntos relacionados. Recupere el producto si es posible. Envíe a plantas de eliminación autorizadas o incineración en condiciones controladas (152/2006 Art. 184).

Trabajar según las disposiciones locales y nacionales vigentes.

Los embalajes contaminados se deben vaciar, siempre que sea posible. Después de la limpieza, reciclar o eliminar en un centro autorizado."

SECCIÓN 14. Información relativa al transporte

- 14.1. Número ONU o número ID
Producto no peligroso según los criterios de la reglamentación del transporte.
- 14.2. Designación oficial de transporte de las Naciones Unidas
N.A.
- 14.3. Clase(s) de peligro para el transporte
N.A.
- 14.4. Grupo de embalaje
N.A.
- 14.5. Peligros para el medio ambiente
ADR-Contaminante ambiental: No
IMDG-Marine pollutant: No
- 14.6. Precauciones particulares para los usuarios
N.A.
- 14.7. Transporte marítimo a granel con arreglo a los instrumentos de la OMI
N.A.

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:

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Ninguna restricción.

Restricciones relacionadas con las sustancias contenidas:

Restricción 30

Restricción 40

Restricción 75

Compuestos orgánicos volátiles - COV = 14.90 %

Compuestos orgánicos volátiles - COV = 149.02 g/Kg

Compuestos orgánicos volátiles - COV = 147.97 g/l

Cuando sean aplicables, hágase referencia a las siguientes normativas:

Directiva 2012/18/EU (Seveso III)

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

Dir. 2004/42/CE (directiva COV)

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

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

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
alcohol etílico

3-Butoxipropan-2-ol; éter monobutílico de propilenglicol

Alcohols, C12-14, ethoxylated, sulfates, sodium salts 1-2,5 moles ethoxylated

SECCIÓN 16. Otra información

Texto de las frases utilizadas en el párrafo 3:

H225 Líquido y vapores muy inflamables.

H319 Provoca irritación ocular grave.

H315 Provoca irritación cutánea.

H226 Líquidos y vapores inflamables.

H336 Puede provocar somnolencia o vértigo.

H318 Provoca lesiones oculares graves.

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

Clase y categoría de peligro	Código	Descripción
Flam. Liq. 2	2.6/2	Líquidos inflamables, Categoría 2
Flam. Liq. 3	2.6/3	Líquidos inflamables, Categoría 3
Skin Irrit. 2	3.2/2	Irritación cutánea, Categoría 2
Eye Dam. 1	3.3/1	Lesiones oculares graves, Categoría 1
Eye Irrit. 2	3.3/2	Irritación ocular, Categoría 2
STOT SE 3	3.8/3	Toxicidad específica en determinados órganos (exposiciones única), Categoría 3
Aquatic Chronic 3	4.1/C3	Peligro crónico (a largo plazo) para el medio ambiente acuático, Categoría 3

Parágrafos modificados respecto la revisión anterior

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SECCIÓN 1. Identificación de la sustancia o la mezcla y de la sociedad o la empresa
SECCIÓN 3. Composición/información sobre los componentes
SECCIÓN 5. Medidas de lucha contra incendios
SECCIÓN 6. Medidas en caso de vertido accidental
SECCIÓN 7. Manipulación y almacenamiento
SECCIÓN 8. Controles de exposición/protección individual
SECCIÓN 9. Propiedades físicas y químicas
SECCIÓN 10. Estabilidad y reactividad
SECCIÓN 11. Información toxicológica
SECCIÓN 12. Información ecológica
SECCIÓN 13. Consideraciones relativas a la eliminación
SECCIÓN 15. Información reglamentaria
SECCIÓN 16. Otra información

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

Principales fuentes bibliográficas:

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

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

La información aquí detallada se basa en nuestros conocimientos hasta la fecha señalada arriba. Se refiere exclusivamente al producto indicado y no constituye garantía de cualidades particulares.

El usuario debe asegurarse de la idoneidad y exactitud de dicha información en relación al uso específico que debe hacer del producto.

Esta ficha anula y sustituye toda edición precedente.

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

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WGK: Clase de peligro para las aguas (Alemania).

Exposure Scenario, 23/07/2019

Substance identity	
Chemical name	Etanolo
CAS No.	64-17-5
EINECS No.	200-578-6

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1. ES 1 Consumer use; Anti-freeze and de-icing products (PC4)	
1.1 TITLE SECTION	
Exposure Scenario name	Car care and maintenance products - De-icing and anti-icing applications
Date - Version	22/07/2019 - 1.0
Life Cycle Stage	Consumer use
Main user group	Consumer uses
Sector(s) of use	Consumer uses (SU21)
Product Categories	Anti-freeze and de-icing products (PC4)
Environment Contributing Scenario	
CS1 Covered by	ERC8d
Consumer Contributing Scenario	
CS2 Car Care - De-icing and anti-icing applications	PC4 - PC4_1
CS3 Car Care - De-icing and anti-icing applications	PC4 - PC4_2
CS4 Car Care - De-icing and anti-icing applications	PC4 - PC4_3
1.2 Conditions of use affecting exposure	
1.2. 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)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid	
Vapour pressure: 5726 Pa	
<i>Conditions and measures related to treatment of waste (including article waste)</i>	
Waste treatment No specific measures identified.	
<i>Other conditions affecting environmental exposure</i>	
Local marine water dilution factor: 100 Local freshwater dilution factor: 10	
1.2. CS2: Consumer Contributing Scenario: Car Care - De-icing and anti-icing applications (PC4)	
Product Categories	Anti-freeze and de-icing products (PC4)
Product (Sub-)Categories	Washing car window (PC4_1)
<i>Product (article) characteristics</i>	
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 0.5 g	
Duration: Covers use up to 0.017 h/event	
Frequency:	

Covers use up to 1 uses per day	
<i>Other conditions affecting consumers exposure</i>	
Room size: Covers use in a one car garage (>34 m ³) under typical ventilation.	
Temperature: Covers use at ambient temperatures.	
1.2. CS3: Consumer Contributing Scenario: Car Care - De-icing and anti-icing applications (PC4)	
Product Categories	Anti-freeze and de-icing products (PC4)
Product (Sub-)Categories	Pouring into radiator (PC4_2)
<i>Product (article) characteristics</i>	
Concentration of substance in product: Covers concentrations up to 10 %	
<i>Amount used, frequency and duration of use/exposure</i>	
Amounts used: Amount per use 2000 g	
Duration: Covers use up to 0.17 h/event	
Frequency: Covers use up to 1 uses per day	
<i>Other conditions affecting consumers exposure</i>	
Room size: Covers use in a one car garage (>34 m ³) under typical ventilation.	
Temperature: Covers use at ambient temperatures.	
Additional conditions human health Covers skin contact area up to 482 cm ²	
1.2. CS4: Consumer Contributing Scenario: Car Care - De-icing and anti-icing applications (PC4)	
Product Categories	Anti-freeze and de-icing products (PC4)
Product (Sub-)Categories	Lock de-icer (PC4_3)
<i>Product (article) characteristics</i>	
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 4 g	
Duration: Covers use up to 0.25 h/event	
Frequency: Covers use up to 1 uses per day	
<i>Other conditions affecting consumers exposure</i>	
Room size: Covers use in a one car garage (>34 m ³) under typical ventilation.	
Temperature: Covers use at ambient temperatures.	
Additional conditions human health Covers skin contact area up to 214 cm ²	
1.3 Exposure estimation and reference to its source	
1.3. CS1: Environment Contributing Scenario: Covered by (ERC8d)	

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
freshwater	0.00443 mg/L	N/A	0.00461
freshwater sediment	0.0172 mg/kg bw/day	N/A	0.00467
marine water	0.000508 mg/L	N/A	0.000643
marine sediment	0.00194 mg/kg bw/day	N/A	0.00064
soil	0.00123 mg/kg bw/day	N/A	0.00724

1.2. CS2: Consumer Contributing Scenario: Car Care - De-icing and anti-icing applications (PC4)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	0.000102 mg/m ³	N/A	8.94E-07
inhalative, local, short-term	0.000102 mg/m ³	N/A	8.94E-07
dermal, systemic, long-term	0 mg/kg bw/day	N/A	N/A
combined routes, systemic, long-term	N/A	N/A	8.94E-07

1.2. CS3: Consumer Contributing Scenario: Car Care - De-icing and anti-icing applications (PC4)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	1.84 mg/m ³	N/A	0.0161
inhalative, local, short-term	1.84 mg/m ³	N/A	0.0161
dermal, systemic, long-term	5.62 mg/kg bw/day	N/A	0.0272
combined routes, systemic, long-term	N/A	N/A	0.0434

1.2. CS4: Consumer Contributing Scenario: Car Care - De-icing and anti-icing applications (PC4)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	0.51 mg/m ³	N/A	0.00447
inhalative, local, short-term	0.51 mg/m ³	N/A	0.0447
dermal, systemic, long-term	14 mg/kg bw/day	N/A	0.0679
combined routes, systemic, long-term	N/A	N/A	0.0724

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 Consumer use; Various products (PC39, PC28)

2.1 TITLE SECTION

Exposure Scenario name	Cosumer other uses
Date - Version	22/07/2019 - 1.0
Life Cycle Stage	Consumer use
Main user group	Consumer uses
Sector(s) of use	Consumer uses (SU21)
Product Categories	Cosmetics, personal care products (PC39) - Perfumes, fragrances (PC28)

Environment Contributing Scenario

CS1 Covered by	ERC8a
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Consumer Contributing Scenario

CS2 Consumer	PC39 - PC28
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2.2 Conditions of use affecting exposure

2.2. CS1: Environment Contributing Scenario: Covered by (ERC8a)

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

Physical form of product:

Liquid

Vapour pressure:

5726 Pa

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

Waste treatment

No specific measures identified.

2.2. CS2: Consumer Contributing Scenario: Consumer (PC39, PC28)

Product Categories	Cosmetics, personal care products - Perfumes, fragrances (PC39, PC28)
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2.3 Exposure estimation and reference to its source

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

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
freshwater	0.00236 mg/L	N/A	0.00246
freshwater sediment	0.00904 mg/kg bw/day	N/A	0.00246
marine water	0.000301 mg/L	N/A	0.000381
marine sediment	0.00115 mg/kg bw/day	N/A	0.00038
soil	0.00115 mg/kg bw/day	N/A	0.00676

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

Guidance to check compliance with the exposure scenario:

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

3. ES 3 Use at industrial site

3.1 TITLE SECTION

Exposure Scenario name	Solvent
Date - Version	22/07/2019 - 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
CS3 Industrial	PROC2
CS4 Industrial	PROC3
CS5 Industrial	PROC4
CS6 Industrial	PROC5
CS7 Industrial	PROC7
CS8 Industrial	PROC8a
CS9 Industrial	PROC8b
CS10 Industrial	PROC10
CS11 Industrial	PROC13
CS12 Industrial	PROC15

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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Product (article) characteristics

Vapour pressure:
< 10 kPa

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

Amounts used:

Annual site tonnage 3000 t(tonnes)/year

Maximum allowable site tonnage (MSafe): 124000 kg/day

Release type: Continuous release

Emission days: 300 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 %
Prevent discharge of undissolved substance to or recover from onsite wastewater.	Water - minimum efficiency of: 87 %

Conditions and measures related to sewage treatment plant

STP type:

Municipal Sewage Treatment Plant

STP effluent (m³/day): 2000

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

Waste treatment

Incineration, disposal or recycling at specific offsite provider Contain and dispose of waste according to local regulations.	Waste - minimum efficiency of: 99.98 %
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Other conditions affecting environmental exposure

Local marine water dilution factor: 100

Local freshwater dilution factor: 10

Receiving surface water flow: 2000 m³/h

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

Additional Good Practice Advice:

Contain leaks or spills within cabinets with removable trays.

3.2. 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)
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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

Use in contained systems

Store substance within a closed system.

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

Personal protection

Use suitable eye protection.

Other conditions affecting worker exposure

Temperature: Covers use at ambient temperatures.

3.2. 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)
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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 Use in contained systems Store substance within a closed system.	
Conditions and measures related to personal protection, hygiene and health evaluation	
Personal protection Use suitable eye protection.	
Other conditions affecting worker exposure	
Temperature: Covers use at ambient temperatures.	
3.2. 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	
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 Store substance within a closed system.	
Conditions and measures related to personal protection, hygiene and health evaluation	
Personal protection Use suitable eye protection.	
Other conditions affecting worker exposure	
Temperature: Covers use at ambient temperatures.	
3.2. 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	
Concentration of substance in product: Covers percentage substance in the product up to 100 %.	
<i>Amount used, frequency and duration of use/exposure</i>	
Duration: Covers daily exposures up to 8 hours	
<i>Technical and organisational conditions and measures</i>	
Technical and organisational measures Use in contained systems Store substance within a closed system.	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection Use suitable eye protection.	
<i>Other conditions affecting worker exposure</i>	
Temperature: Covers use at ambient temperatures.	
3.2. CS6: Worker Contributing Scenario: Industrial (PROC5)	
Process Categories	Mixing or blending in batch processes (PROC5)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid	
Vapour pressure: < 10 kPa	
Concentration of substance in product: Covers percentage substance in the product up to 100 %.	
<i>Amount used, frequency and duration of use/exposure</i>	
Duration: Covers daily exposures up to 8 hours	
<i>Technical and organisational conditions and measures</i>	
Technical and organisational measures Use in contained systems Store substance within a closed system.	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection Use suitable eye protection.	
<i>Other conditions affecting worker exposure</i>	
Temperature: Covers use at ambient temperatures.	
3.2. CS7: Worker Contributing Scenario: Industrial (PROC7)	
Process Categories	Industrial spraying (PROC7)
<i>Product (article) characteristics</i>	
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**

Use in contained systems

Store substance within a closed system.

Provide a good standard of controlled ventilation (10 to 15 air changes per hour).

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

Use suitable eye protection.

*Other conditions affecting worker exposure***Temperature:** Covers use at ambient temperatures.**3.2. 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

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

Store substance within a closed system.

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

Use suitable eye protection.

*Other conditions affecting worker exposure***Temperature:** Covers use at ambient temperatures.**3.2. 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	
Concentration of substance in product: Covers percentage substance in the product up to 100 %.	
<i>Amount used, frequency and duration of use/exposure</i>	
Duration: Covers daily exposures up to 8 hours	
<i>Technical and organisational conditions and measures</i>	
Technical and organisational measures Use in contained systems Store substance within a closed system.	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection Use suitable eye protection.	
<i>Other conditions affecting worker exposure</i>	
Temperature: Covers use at ambient temperatures.	
3.2. CS10: Worker Contributing Scenario: Industrial (PROC10)	
Process Categories	Roller application or brushing (PROC10)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid	
Vapour pressure: < 10 kPa	
Concentration of substance in product: Covers percentage substance in the product up to 100 %.	
<i>Amount used, frequency and duration of use/exposure</i>	
Duration: Covers daily exposures up to 8 hours	
<i>Technical and organisational conditions and measures</i>	
Technical and organisational measures Use in contained systems Store substance within a closed system.	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection Use suitable eye protection.	
<i>Other conditions affecting worker exposure</i>	
Temperature: Covers use at ambient temperatures.	
3.2. CS11: Worker Contributing Scenario: Industrial (PROC13)	
Process Categories	Treatment of articles by dipping and pouring (PROC13)
<i>Product (article) characteristics</i>	
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**

Use in contained systems

Store substance within a closed system.

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

Use suitable eye protection.

Other conditions affecting worker exposure

Temperature: Covers use at ambient temperatures.

3.2. CS12: Worker Contributing Scenario: Industrial (PROC15)**Process Categories**

Use as laboratory reagent (PROC15)

*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**

Use in contained systems

Store substance within a closed system.

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

Use suitable eye protection.

Other conditions affecting worker exposure

Temperature: Covers use at ambient temperatures.

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	0.98 %	N/A
Water	0.01 %	N/A
soil	0 %	N/A

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
wastewater treatment plant microbes	6.32 mg/L	N/A	0.0109
freshwater	0.577 mg/L	N/A	0.601
freshwater sediment	2.21 mg/kg bw/day	N/A	0.601
marine water	0.0635 mg/L	N/A	0.0804
marine sediment	0.0635 mg/kg bw/day	N/A	0.0805
soil	0.0525 mg/kg bw/day	N/A	0.309

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	9.6 mg/m ³	N/A	< 0.01
dermal, systemic, long-term	0.03 mg/kg bw/day	N/A	< 0.01
combined routes, systemic, long-term	N/A	N/A	< 0.01

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	9.6 mg/m ³	N/A	0.01
dermal, systemic, long-term	1.4 mg/kg bw/day	N/A	0.004
combined routes, systemic, long-term	N/A	N/A	0.0141

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	19 mg/m ³	N/A	0.02
dermal, systemic, long-term	0.69 mg/kg bw/day	N/A	0.002
combined routes, systemic, long-term	N/A	N/A	0.0222

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
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inhalative, systemic, long-term	38 mg/m ³	N/A	0.04
dermal, systemic, long-term	6.9 mg/kg bw/day	N/A	0.02
combined routes, systemic, long-term	N/A	N/A	0.0603

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	96 mg/m ³	N/A	0.101
dermal, systemic, long-term	14 mg/kg bw/day	N/A	0.04
combined routes, systemic, long-term	N/A	N/A	0.141

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	140 mg/m ³	N/A	0.151
dermal, systemic, long-term	43 mg/kg bw/day	N/A	0.125
combined routes, systemic, long-term	N/A	N/A	0.276

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	96 mg/m ³	N/A	0.101
dermal, systemic, long-term	96 mg/kg bw/day	N/A	0.04
combined routes, systemic, long-term	N/A	N/A	0.141

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	48 mg/m ³	N/A	0.05
dermal, systemic, long-term	14 mg/kg bw/day	N/A	0.04
combined routes, systemic, long-term	N/A	N/A	0.0904

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
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inhalative, systemic, long-term	96 mg/m ³	N/A	0.101
dermal, systemic, long-term	27 mg/kg bw/day	N/A	0.08
combined routes, systemic, long-term	N/A	N/A	0.181

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	96 mg/m ³	N/A	0.101
dermal, systemic, long-term	14 mg/kg bw/day	N/A	0.04
combined routes, systemic, long-term	N/A	N/A	0.141

3.3. CS12: Worker Contributing Scenario: Industrial (PROC15)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	19 mg/m ³	N/A	0.02
dermal, systemic, long-term	0.34 mg/kg bw/day	N/A	< 0.01
combined routes, systemic, long-term	N/A	N/A	0.0212

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	Fuel
Date - Version	22/07/2019 - 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	ERC7
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Worker Contributing Scenario

CS2 Industrial	PROC1
CS3 Industrial	PROC2
CS4 Industrial	PROC3
CS5 Industrial	PROC8a
CS6 Industrial	PROC8b
CS7 Industrial	PROC15
CS8 Industrial	PROC16

4.2 Conditions of use affecting exposure

4.2. CS1: Environment Contributing Scenario: Covered by (ERC7)

Environmental release categories	Use of functional fluid at industrial site (ERC7)
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Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

< 10 kPa

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

Amounts used:

Annual site tonnage 20000 t(tonnes)/year

Maximum allowable site tonnage (MSafe): 14500000 kg/day

Release type: Continuous release

Emission days: 300 days per year

Technical and organisational conditions and measures

Control measures to prevent releases

Provide onsite wastewater removal efficiency of ³ (%):

Water - minimum efficiency of: 87 %

Conditions and measures related to sewage treatment plant	
STP type: Municipal Sewage Treatment Plant Water - minimum efficiency of: = 87 % 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 Receiving surface water flow: 2000 m ³ /day	
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.	
Additional Good Practice Advice: Adequate closed storage facilities (e.g., bulk storage tanks, intermediate bulk containers, drums) are required.	
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)
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 Handle substance within a closed system. Store substance within a closed system.	
Conditions and measures related to personal protection, hygiene and health evaluation	
Personal protection Use suitable eye protection.	
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)
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	
<i>Technical and organisational conditions and measures</i>	
Technical and organisational measures Handle substance within a closed system. Store substance within a closed system.	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection Use suitable eye protection.	
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	
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. Store substance within a closed system.	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection Use suitable eye protection.	
4.2. CS5: Worker Contributing Scenario: Industrial (PROC8a)	
Process Categories	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid	
Vapour pressure: < 10 kPa	
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. Store substance within a closed system.	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	

Personal protection Use suitable eye protection.	
4.2. CS6: Worker Contributing Scenario: Industrial (PROC8b)	
Process Categories	Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid	
Vapour pressure: < 10 kPa	
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. Store substance within a closed system.	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection Use suitable eye protection.	
4.2. CS7: Worker Contributing Scenario: Industrial (PROC15)	
Process Categories	Use as laboratory reagent (PROC15)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid	
Vapour pressure: < 10 kPa	
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. Store substance within a closed system.	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection Use suitable eye protection.	
4.2. CS8: Worker Contributing Scenario: Industrial (PROC16)	
Process Categories	Use of fuels (PROC16)
<i>Product (article) characteristics</i>	
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**

Handle substance within a closed system.

Store substance within a closed system.

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

Use suitable eye protection.

4.3 Exposure estimation and reference to its source**4.3. CS1: Environment Contributing Scenario: Covered by (ERC7)**

Release route	Release rate	Release estimation method
Air	0.0025 %	N/A
Water	1E-05 %	N/A
soil	0 %	N/A

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
wastewater treatment plant microbes	0.0421 mg/L	N/A	7.26E-05
freshwater	0.00657 mg/L	N/A	0.00684
freshwater sediment	0.00685 mg/kg bw/day	N/A	0.00685
marine water	0.00363 mg/L	N/A	0.00459
marine sediment	0.0139 mg/kg bw/day	N/A	0.00459
soil	0.00694 mg/kg bw/day	N/A	0.0408

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	0.019 mg/m ³	N/A	< 0.001
dermal, systemic, long-term	0.03 mg/kg bw/day	N/A	< 0.001
combined routes, systemic, long-term	N/A	N/A	< 0.001

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	9.6 mg/m ³	N/A	0.01
dermal, systemic, long-term	1.4 mg/kg bw/day	N/A	0.004
combined routes, systemic, long-term	N/A	N/A	0.0222

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	19 mg/m ³	N/A	0.02
dermal, systemic, long-term	0.69 mg/kg bw/day	N/A	0.002
combined routes, systemic, long-term	N/A	N/A	0.222

4.3. CS5: Worker Contributing Scenario: Industrial (PROC8a)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	96 mg/m ³	N/A	0.101
dermal, systemic, long-term	14 mg/m ³	N/A	0.04
combined routes, systemic, long-term	N/A	N/A	0.141

4.3. CS6: Worker Contributing Scenario: Industrial (PROC8b)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	48 mg/m ³	N/A	0.05
dermal, systemic, long-term	14 mg/kg bw/day	N/A	0.04
combined routes, systemic, long-term	N/A	N/A	0.0904

4.3. CS7: Worker Contributing Scenario: Industrial (PROC15)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	19 mg/m ³	N/A	0.02
dermal, systemic, long-term	0.34 mg/kg bw/day	N/A	< 0.001

combined routes, systemic, long-term	N/A	N/A	0.0112
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4.3. CS8: Worker Contributing Scenario: Industrial (PROC16)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	9.6 mg/m ³	N/A	0.01
dermal, systemic, long-term	0.34 mg/kg bw/day	N/A	< 0.001
combined routes, systemic, long-term	N/A	N/A	0.0111

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	Solvent
Date - Version	23/07/2019 - 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
CS3 General use from professional operators	PROC2
CS4 General use from professional operators	PROC3
CS5 General use from professional operators	PROC4
CS6 General use from professional operators	PROC5 - PROC8a
CS7 General use from professional operators	PROC8b
CS8 General use from professional operators	PROC10
CS9 General use from professional operators	PROC11
CS10 General use from professional operators	PROC11
CS11 General use from professional operators	PROC13
CS12 General use from professional operators	PROC19

5.2 Conditions of use affecting exposure

5.2. 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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Product (article) characteristics

Physical form of product:

Liquid, vapour pressure 0,5 - 10 kPa at STP

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

Amounts used:

Annual site tonnage 0.1 t(tonnes)/year

Maximum allowable site tonnage (MSafe): 715 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 (%):	Air - minimum efficiency of: 90 %
Prevent discharge of undissolved substance to or recover from onsite wastewater.	

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

Waste treatment

Hazardous waste incineration	Waste - minimum efficiency of: 99.98 %
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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 0,5 - 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

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

Personal protection

Use suitable eye protection.

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)
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Product (article) characteristics

Physical form of product:

Liquid, vapour pressure 0,5 - 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

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

Personal protection

Use suitable eye protection.

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)
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Product (article) characteristics

Physical form of product:

Liquid, vapour pressure 0,5 - 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>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection Use suitable eye protection.	
5.2. CS5: Worker Contributing Scenario: General use from professional operators (PROC4)	
Process Categories	Chemical production where opportunity for exposure arises (PROC4)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid, vapour pressure 0,5 - 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>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection Use suitable eye protection.	
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)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid, vapour pressure 0,5 - 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>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection Use suitable eye protection.	
5.2. CS7: Worker Contributing Scenario: General use from professional operators (PROC8b)	
Process Categories	Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid, vapour pressure 0,5 - 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>Conditions and measures related to personal protection, hygiene and health evaluation</i>	

Personal protection Use suitable eye protection.	
5.2. CS8: Worker Contributing Scenario: General use from professional operators (PROC10)	
Process Categories	Roller application or brushing (PROC10)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid, vapour pressure 0,5 - 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>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection Use suitable eye protection.	
5.2. CS9: Worker Contributing Scenario: General use from professional operators (PROC11)	
Process Categories	Non industrial spraying (PROC11)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid, vapour pressure 0,5 - 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 Provide a good standard of controlled ventilation (10 to 15 air changes per hour).	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection Use suitable eye protection. Wear suitable gloves tested to EN374.	
<i>Other conditions affecting worker exposure</i>	
Indoor use	
5.2. CS10: Worker Contributing Scenario: General use from professional operators (PROC11)	
Process Categories	Non industrial spraying (PROC11)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid, vapour pressure 0,5 - 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

Provide a good standard of controlled ventilation (10 to 15 air changes per hour).

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

Personal protection

Use suitable eye protection.

Wear suitable gloves tested to EN374.

Wear a respirator conforming to EN140.

Other conditions affecting worker exposure

Outdoor use

5.2. CS11: 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 0,5 - 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

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

Personal protection

Use suitable eye protection.

Wear suitable gloves tested to EN374.

5.2. CS12: 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 0,5 - 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

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

Personal protection

Use suitable eye protection.

Wear suitable gloves tested to EN374.

5.3 Exposure estimation and reference to its source

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

Release route	Release rate	Release estimation method
Air	0.98 %	N/A
Water	0.01 %	N/A

soil	0.01 %	N/A
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protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
wastewater treatment plant microbes	0.000173 mg/L	N/A	2.98E-07
freshwater	0.00238 mg/L	N/A	0.00248
freshwater sediment	0.00912 mg/kg bw/day	N/A	0.00248
marine sediment	0.000303 mg/L	N/A	0.000384
marine sediment	0.00116 mg/kg bw/day	N/A	0.000383
soil	0.00116 mg/kg bw/day	N/A	0.00682

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	0.019 mg/m ³	N/A	< 0.001
dermal, systemic, long-term	0.03 mg/kg bw/day	N/A	< 0.001
combined routes, systemic, long-term	N/A	N/A	< 0.001

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	38 mg/m ³	N/A	0.04
dermal, systemic, long-term	1.4 mg/kg bw/day	N/A	0.004
combined routes, systemic, long-term	N/A	N/A	0.0443

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	48 mg/m ³	N/A	0.05
dermal, systemic, long-term	0.69 mg/kg bw/day	N/A	0.002
combined routes, systemic, long-term	N/A	N/A	0.0524

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	96 mg/m ³	N/A	0.101
dermal, systemic, long-term	6.9 mg/kg bw/day	N/A	0.02
combined routes, systemic, long-term	N/A	N/A	0.121

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	190 mg/m ³	N/A	0.202
dermal, systemic, long-term	14 mg/kg bw/day	N/A	0.04
combined routes, systemic, long-term	N/A	N/A	0.242

5.3. CS7: Worker Contributing Scenario: General use from professional operators (PROC8b)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	96 mg/m ³	N/A	0.202
dermal, systemic, long-term	14 mg/kg bw/day	N/A	0.04
combined routes, systemic, long-term	N/A	N/A	0.141

5.3. CS8: Worker Contributing Scenario: General use from professional operators (PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	190 mg/m ³	N/A	0.202
dermal, systemic, long-term	27 mg/kg bw/day	N/A	0.08
combined routes, systemic, long-term	N/A	N/A	0.282

5.3. CS9: 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	290 mg/m ³	N/A	0.303
dermal, systemic, long-term	21 mg/kg bw/day	N/A	0.062
combined routes, systemic, long-term	N/A	N/A	0.365

5.3. CS10: 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	67 mg/m ³	N/A	0.071
dermal, systemic, long-term	21 mg/kg bw/day	N/A	0.062
combined routes, systemic, long-term	N/A	N/A	0.133

5.3. CS11: 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	190 mg/m ³	N/A	0.202
dermal, systemic, long-term	2.7 mg/kg bw/day	N/A	0.008
combined routes, systemic, long-term	N/A	N/A	0.21

5.3. CS12: 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	190 mg/m ³	N/A	0.202
dermal, systemic, long-term	28 mg/kg bw/day	N/A	0.082
combined routes, systemic, long-term	N/A	N/A	0.284

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

Guidance to check compliance with the exposure scenario:

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

6. ES 6 Widespread use by professional workers

6.1 TITLE SECTION

Exposure Scenario name	Fuel
Date - Version	23/07/2019 - 1.0
Life Cycle Stage	Widespread use by professional workers
Main user group	Professional uses
Sector(s) of use	Professional uses (SU22)

Environment Contributing Scenario

CS1 Covered by	ERC9a - ERC9b
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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	PROC8a
CS6 General use from professional operators	PROC8b
CS7 General use from professional operators	PROC16

6.2 Conditions of use affecting exposure

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

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

Physical form of product:

Liquid, vapour pressure 0,5 - 10 kPa at STP

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

Amounts used:

Annual site tonnage 1 t(tonnes)/year

Maximum allowable site tonnage (MSafe): 7190 kg/day

Release type: Continuous release

Emission days: 365 days per year

Technical and organisational conditions and measures

Control measures to prevent releases

Prevent discharge of undissolved substance to or recover from onsite wastewater.

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

Waste treatment

Product residual disposal complies with applicable regulations.

6.2. 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 0,5 - 10 kPa at STP	
Concentration of substance in product: Covers percentage substance in the product up to 100 %.	
Technical and organisational conditions and measures	
Technical and organisational measures Handle substance within a closed system. Store substance within a closed system.	
Conditions and measures related to personal protection, hygiene and health evaluation	
Personal protection Use suitable eye protection.	
6.2. 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 0,5 - 10 kPa at STP	
Concentration of substance in product: Covers percentage substance in the product up to 100 %.	
Technical and organisational conditions and measures	
Technical and organisational measures Handle substance within a closed system. Store substance within a closed system.	
Conditions and measures related to personal protection, hygiene and health evaluation	
Personal protection Use suitable eye protection.	
6.2. 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 0,5 - 10 kPa at STP	
Concentration of substance in product: Covers percentage substance in the product up to 100 %.	
Technical and organisational conditions and measures	
Technical and organisational measures Handle substance within a closed system. Store substance within a closed system.	
Conditions and measures related to personal protection, hygiene and health evaluation	
Personal protection Use suitable eye protection.	
6.2. CS5: Worker Contributing Scenario: General use from professional operators (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 0,5 - 10 kPa at STP	

Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

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

Handle substance within a closed system.
Store substance within a closed system.

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

Use suitable eye protection.

6.2. CS6: Worker Contributing Scenario: General use from professional operators (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 0,5 - 10 kPa at STP

Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

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

Handle substance within a closed system.
Store substance within a closed system.

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

Use suitable eye protection.

6.2. CS7: Worker Contributing Scenario: General use from professional operators (PROC16)**Process Categories**

Use of fuels (PROC16)

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

Liquid, vapour pressure 0,5 - 10 kPa at STP

Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

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

Handle substance within a closed system.
Store substance within a closed system.

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

Use suitable eye protection.

6.3 Exposure estimation and reference to its source**6.3. CS1: Environment Contributing Scenario: Covered by (ERC9a, ERC9b)**

Release route	Release rate	Release estimation method
Air	0.01 %	N/A
Water	1E-05 %	N/A

soil	0 %	N/A
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6.3. 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	0.019 mg/m ³	N/A	< 0.001
dermal, systemic, long-term	0.03 mg/kg bw/day	N/A	< 0.001
combined routes, systemic, long-term	N/A	N/A	< 0.001

6.3. 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	38 mg/m ³	N/A	0.04
dermal, systemic, long-term	1.4 mg/kg bw/day	N/A	0.004
combined routes, systemic, long-term	N/A	N/A	0.0443

6.3. 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	48 mg/m ³	N/A	0.05
dermal, systemic, long-term	0.69 mg/kg bw/day	N/A	0.002
combined routes, systemic, long-term	N/A	N/A	0.0524

6.3. CS5: Worker Contributing Scenario: General use from professional operators (PROC8a)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	190 mg/m ³	N/A	0.202
dermal, systemic, long-term	14 mg/kg bw/day	N/A	0.04
combined routes, systemic, long-term	N/A	N/A	0.242

6.3. CS6: Worker Contributing Scenario: General use from professional operators (PROC8b)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	96 mg/m ³	N/A	0.101
dermal, systemic, long-term	14 mg/kg bw/day	N/A	0.04

combined routes, systemic, long-term	N/A	N/A	0.141
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6.3. CS7: Worker Contributing Scenario: General use from professional operators (PROC16)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	19 mg/m ³	N/A	0.02
dermal, systemic, long-term	0.34 mg/kg bw/day	N/A	< 0.001
combined routes, systemic, long-term	N/A	N/A	0.0212

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

Guidance to check compliance with the exposure scenario:

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

7. ES 7 Consumer use; Fuels (PC13)

7.1 TITLE SECTION

Exposure Scenario name	Fuel
Date - Version	23/07/2019 - 1.0
Life Cycle Stage	Consumer use
Main user group	Consumer uses
Sector(s) of use	Consumer uses (SU21)
Product Categories	Fuels (PC13)

Environment Contributing Scenario

CS1 Covered by	ERC9b
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Consumer Contributing Scenario

CS2 Consumer	PC13 - PC13_1
CS3 Consumer	PC13 - PC13_2
CS4 Consumer	PC13 - PC13_3
CS5 Consumer	PC13 - PC13_4

7.2 Conditions of use affecting exposure

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

Environmental release categories	Widespread use of functional fluid (outdoor) (ERC9b)
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Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

5726 Pa

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

7.2. CS2: Consumer Contributing Scenario: Consumer (PC13)

Product Categories	Fuels (PC13)
Product (Sub-)Categories	Liquid: Automotive Refuelling (PC13_1)

Product (article) characteristics

Concentration of substance in product:

Covers concentrations up to 85 %

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 37500 g

Duration: Exposure duration 0.05 h/event Frequency: Covers use up to 51 times per year	
<i>Other conditions affecting consumers exposure</i>	
Outdoor use	
Additional conditions human health Covers skin contact area up to 210 cm ²	
7.2. CS3: Consumer Contributing Scenario: Consumer (PC13)	
Product Categories	Fuels (PC13)
Product (Sub-)Categories	Liquid Scooter Refuelling (PC13_2)
<i>Product (article) characteristics</i>	
Concentration of substance in product: Covers concentrations up to 85 %	
<i>Amount used, frequency and duration of use/exposure</i>	
Amounts used: Amount per use 37500 g	
Duration: Exposure duration 0.033 h/event Frequency: Covers use up to 51 times per year	
<i>Other conditions affecting consumers exposure</i>	
Outdoor use	
Additional conditions human health Covers skin contact area up to 210 cm ²	
7.2. CS4: Consumer Contributing Scenario: Consumer (PC13)	
Product Categories	Fuels (PC13)
Product (Sub-)Categories	Liquid, Garden equipment - Use (PC13_3)
<i>Product (article) characteristics</i>	
Concentration of substance in product: Covers concentrations up to 15 %	
<i>Amount used, frequency and duration of use/exposure</i>	
Amounts used: Amount per use 750 g	
Duration: Exposure duration 2 h/event Frequency: Covers use up to 25 times per year	
<i>Other conditions affecting consumers exposure</i>	
Outdoor use	
Additional conditions human health Covers skin contact area up to 210 cm ²	
7.2. CS5: Consumer Contributing Scenario: Consumer (PC13)	
Product Categories	Fuels (PC13)

Product (Sub-)Categories	Liquid: Garden equipment - Refuelling (PC13_4)		
Product (article) characteristics			
Concentration of substance in product: Covers concentrations up to 85 %			
Amount used, frequency and duration of use/exposure			
Amounts used: Amount per use 750 g			
Duration: Exposure duration 0.05 h/event			
Frequency: Covers use up to 25 times per year			
Other conditions affecting consumers exposure			
Room size: Covers use in a one car garage (>34 m³) under typical ventilation.			
Temperature: Covers use at ambient temperatures.			
Additional conditions human health Covers skin contact area up to 210 cm²			

7.3 Exposure estimation and reference to its source

7.3. CS1: Environment Contributing Scenario: Covered by (ERC9b)

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
freshwater	0.0236 mg/L	N/A	0.00246
freshwater sediment	0.00905 mg/kg bw/day	N/A	0.00246
marine water	0.0003 mg/L	N/A	0.00038
marine sediment	0.0015 mg/kg bw/day	N/A	0.00038
marine sediment	0.0015 mg/kg bw/day	N/A	0.00676

7.2. CS2: Consumer Contributing Scenario: Consumer (PC13)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	0.187 mg/m³	N/A	0.00164
inhalative, local, short-term	1.3 mg/m³	N/A	0.0114
dermal, systemic, long-term	0.117 mg/kg bw/day	N/A	8.1E-05
combined routes, systemic, long-term	N/A	N/A	0.0114

7.2. CS3: Consumer Contributing Scenario: Consumer (PC13)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	0.0612 mg/m³	N/A	0.000544

inhalative, local, short-term	0.434 mg/m ³	N/A	0.0038
dermal, systemic, long-term	0.117 mg/kg bw/day	N/A	8.1E-05
combined routes, systemic, long-term	N/A	N/A	0.00388

7.2. CS4: Consumer Contributing Scenario: Consumer (PC13)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	0.0764 mg/m ³	N/A	0.00067
inhalative, local, short-term	1.09 mg/m ³	N/A	0.00956
dermal, systemic, long-term	4.13 mg/kg bw/day	N/A	0.0014
combined routes, systemic, long-term	N/A	N/A	0.0109

7.2. CS5: Consumer Contributing Scenario: Consumer (PC13)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	0.079 mg/m ³	N/A	0.000692
inhalative, local, short-term	1.12 mg/m ³	N/A	0.00982
dermal, systemic, long-term	0.117 mg/kg bw/day	N/A	3.98E-05
combined routes, systemic, long-term	N/A	N/A	0.00986

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

Guidance to check compliance with the exposure scenario:

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

8. ES 8 Consumer use; Various products (PC1, PC3, PC8, PC18, PC23)

8.1 TITLE SECTION

Exposure Scenario name	Cosumer other uses
Date - Version	23/07/2019 - 1.0
Life Cycle Stage	Consumer use
Main user group	Consumer uses
Sector(s) of use	Consumer uses (SU21)
Product Categories	Adhesives, sealants (PC1) - Air care products (PC3) - Biocidal products (PC8) - Ink and toners (PC18) - Leather treatment products (PC23) - Lubricants, greases, release products (PC24) - Plant protection products (PC27) - Polishes and wax blends (PC31) - Textile dyes and impregnating products (PC34)

Environment Contributing Scenario

CS1 Covered by	ERC8a - ERC8d
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Consumer Contributing Scenario

CS2 Consumer	PC1 - PC1_1
CS3 Consumer	PC1 - PC1_3
CS4 Consumer	PC1 - PC1_4
CS5 Consumer	PC3 - PC3_1
CS6 Consumer	PC3 - PC3_2
CS7 Consumer	PC8 - PC35_1, PC8_1
CS8 Consumer	PC8 - PC8_2, PC35_2
CS9 Consumer	PC8 - PC8_3, PC35_3
CS10 Consumer	PC18
CS11 Consumer	PC23 - PC23_1, PC31_1
CS12 Consumer	PC23 - PC23_2, PC31_2
CS13 Consumer	PC24 - PC16_1, PC17_1, PC24_1, 36
CS14 Consumer	PC27
CS15 Consumer	PC31 - PC23_1, PC31_1
CS16 Consumer	PC31 - PC23_2, PC31_2

8.2 Conditions of use affecting exposure

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

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

Physical form of product:

Liquid, vapour pressure > 10 kPa at STP

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

Waste treatment

Hazardous waste incineration	Waste - minimum efficiency of: 99.8 %
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Other conditions affecting environmental exposure

Local marine water dilution factor: 100

Local freshwater dilution factor: 10

Receiving surface water flow: 2000 m³/day

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

Product Categories	Adhesives, sealants (PC1)
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Product (Sub-)Categories	Glues, hobby use (PC1_1)
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Product (article) characteristics

Concentration of substance in product:

Covers concentrations up to 70 %

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 50 g

Duration:

Exposure duration 4 h/event

Frequency:

Covers exposure up to 1 events per day

Other conditions affecting consumers exposure

Room size: Covers use in room size of 20 m³

Additional conditions human health

Covers skin contact area up to 35 cm²

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

Product Categories	Adhesives, sealants (PC1)
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Product (Sub-)Categories	Glue from spray (PC1_3)
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Product (article) characteristics

Concentration of substance in product:

Covers concentrations up to 30 %

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 50 g

Duration:

Exposure duration 4 h/event

Frequency:

Covers exposure up to 6 times per year

Other conditions affecting consumers exposure

Room size: Covers use in room size of 20 m³

Additional conditions human health

Covers skin contact area up to 35 cm²

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

Product Categories	Adhesives, sealants (PC1)
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Product (Sub-)Categories	Sealants (PC1_4)
<i>Product (article) characteristics</i>	
Concentration of substance in product: Covers concentrations up to 30 %	
<i>Amount used, frequency and duration of use/exposure</i>	
Amounts used: Amount per use 50 g	
Duration: Exposure duration 1 h/event	
Frequency: Covers exposure up to 1 events per day	
<i>Other conditions affecting consumers exposure</i>	
Room size: Covers use in room size of 20 m ³	
Additional conditions human health Covers skin contact area up to 35 cm ²	
8.2. CS5: Consumer Contributing Scenario: Consumer (PC3)	
Product Categories	Air care products (PC3)
Product (Sub-)Categories	Air care, instant action (aerosol sprays) (PC3_1)
<i>Product (article) characteristics</i>	
Concentration of substance in product: Covers concentrations up to 40 %	
<i>Amount used, frequency and duration of use/exposure</i>	
Amounts used: Amount per use 50 g	
Duration: Exposure duration 0.3 h/event	
Frequency: Covers exposure up to 4 events per day	
<i>Other conditions affecting consumers exposure</i>	
Room size: Covers use in room size of 20 m ³	
Additional conditions human health Covers skin contact area up to 35 cm ²	
8.2. CS6: Consumer Contributing Scenario: Consumer (PC3)	
Product Categories	Air care products (PC3)
Product (Sub-)Categories	Air care, continuous action (solid and liquid) (PC3_2)
<i>Product (article) characteristics</i>	
Concentration of substance in product: Covers concentrations up to 10 %	
<i>Amount used, frequency and duration of use/exposure</i>	
Amounts used: Amount per use 50 g	
Duration: Exposure duration 8 h/event	
Frequency:	

Covers exposure up to 1 events per day	
<i>Other conditions affecting consumers exposure</i>	
Room size: Covers use in room size of 20 m ³	
Additional conditions human health Covers skin contact area up to 35 cm ²	
8.2. CS7: Consumer Contributing Scenario: Consumer (PC8)	
Product Categories	Biocidal products (PC8)
Product (Sub-)Categories	Laundry and dish washing products (PC35_1, PC8_1)
<i>Product (article) characteristics</i>	
Concentration of substance in product: Covers percentage substance in the product up to 5 %.	
<i>Amount used, frequency and duration of use/exposure</i>	
Amounts used: Amount per use 15 g	
Duration: Exposure duration 0.5 h/event	
Frequency: Covers exposure up to 1 events per day	
<i>Other conditions affecting consumers exposure</i>	
Room size: Covers use in room size of 20 m ³	
Additional conditions human health Covers skin contact area up to 857 cm ²	
8.2. CS8: Consumer Contributing Scenario: Consumer (PC8)	
Product Categories	Biocidal products (PC8)
Product (Sub-)Categories	Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) (PC8_2, PC35_2)
<i>Product (article) characteristics</i>	
Concentration of substance in product: Covers percentage substance in the product up to 5 %.	
<i>Amount used, frequency and duration of use/exposure</i>	
Amounts used: Amount per use 50 g	
Duration: Exposure duration 0.3 h/event	
Frequency: Covers exposure up to 125 times per year	
<i>Other conditions affecting consumers exposure</i>	
Room size: Covers use in room size of 20 m ³	
Additional conditions human health Covers skin contact area up to 857 cm ²	
8.2. CS9: Consumer Contributing Scenario: Consumer (PC8)	
Product Categories	Biocidal products (PC8)
Product (Sub-)Categories	Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) (PC8_3, PC35_3)

Product (article) characteristics	
Concentration of substance in product: Covers concentrations up to 15 %	
Amount used, frequency and duration of use/exposure	
Amounts used: Amount per use 50 g	
Duration: Exposure duration 0.2 h/event	
Frequency: Covers exposure up to 125 times per year	
Other conditions affecting consumers exposure	
Room size: Covers use in room size of 20 m ³ Ventilation rate: Covers use under typical household ventilation.	
Additional conditions human health Covers skin contact area up to 428 cm ²	
8.2. CS10: Consumer Contributing Scenario: Consumer (PC18)	
Product Categories	Ink and toners (PC18)
Product (article) characteristics	
Concentration of substance in product: Covers concentrations up to 50 %	
Amount used, frequency and duration of use/exposure	
Amounts used: Amount per use 50 g	
Duration: Exposure duration 8 h/event	
Frequency: Covers exposure up to 1 uses per day	
Other conditions affecting consumers exposure	
Room size: Covers use in room size of 20 m ³ Ventilation rate: Covers use under typical household ventilation.	
Additional conditions human health Covers skin contact area up to 71 cm ²	
8.2. CS11: Consumer Contributing Scenario: Consumer (PC23)	
Product Categories	Leather treatment products (PC23)
Product (Sub-)Categories	Polishes, wax/cream (floor, furniture, shoes) (PC23_1, PC31_1)
Product (article) characteristics	
Concentration of substance in product: Covers concentrations up to 50 %	
Amount used, frequency and duration of use/exposure	
Amounts used: Amount per use 50 g	
Duration: Exposure duration 1.2 h/event	
Frequency: Covers exposure up to 29 times per year	

Other conditions affecting consumers exposure

Room size: Covers use in room size of 20 m³

Ventilation rate: Covers use under typical household ventilation.

Additional conditions human health

Covers skin contact area up to 430 cm²

8.2. CS12: Consumer Contributing Scenario: Consumer (PC23)

Product Categories	Leather treatment products (PC23)
Product (Sub-)Categories	Polishes, spray (furniture, shoes) (PC23_2, PC31_2)

Product (article) characteristics

Concentration of substance in product:

Covers concentrations up to 20 %

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 50 g

Duration:

Exposure duration 0.3 h/event

Frequency:

Covers exposure up to 8 times per year

Other conditions affecting consumers exposure

Room size: Covers use in room size of 20 m³

Ventilation rate: Covers use under typical household ventilation.

Additional conditions human health

Covers skin contact area up to 430 cm²

8.2. CS13: Consumer Contributing Scenario: Consumer (PC24)

Product Categories	Lubricants, greases, release products (PC24)
Product (Sub-)Categories	Liquids (PC16_1, PC17_1, PC24_1, 36)

Product (article) characteristics

Concentration of substance in product:

Covers concentrations up to 20 %

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 50 g

Duration:

Exposure duration 0.2 h/event

Frequency:

Covers exposure up to 4 times per year

Other conditions affecting consumers exposure

Room size: Covers use in room size of 20 m³

Ventilation rate: Covers use under typical household ventilation.

Additional conditions human health

Covers skin contact area up to 468 cm²

8.2. CS14: Consumer Contributing Scenario: Consumer (PC27)

Product Categories	Plant protection products (PC27)
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Product (article) characteristics

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 50 g	
Duration: Exposure duration 0.3 h/event	
Frequency: Covers exposure up to 29 times per year	
<i>Other conditions affecting consumers exposure</i>	
Room size: Covers use in room size of 20 m ³ Ventilation rate: Covers use under typical household ventilation.	
Additional conditions human health Covers skin contact area up to 857 cm ²	
8.2. CS15: Consumer Contributing Scenario: Consumer (PC31)	
Product Categories	Polishes and wax blends (PC31)
Product (Sub-)Categories	Polishes, wax/cream (floor, furniture, shoes) (PC23_1, PC31_1)
<i>Product (article) characteristics</i>	
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 50 g	
Duration: Exposure duration 1.2 h/event	
Frequency: Covers exposure up to 29 times per year	
<i>Other conditions affecting consumers exposure</i>	
Room size: Covers use in room size of 20 m ³ Ventilation rate: Covers use under typical household ventilation.	
Additional conditions human health Covers skin contact area up to 430 cm ²	
8.2. CS16: Consumer Contributing Scenario: Consumer (PC31)	
Product Categories	Polishes and wax blends (PC31)
Product (Sub-)Categories	Polishes, spray (furniture, shoes) (PC23_2, PC31_2)
<i>Product (article) characteristics</i>	
Concentration of substance in product: Covers concentrations up to 10 %	
<i>Amount used, frequency and duration of use/exposure</i>	
Amounts used: Amount per use 50 g	
Duration: Exposure duration 0.3 h/event	
Frequency: Covers exposure up to 8 times per year	

Other conditions affecting consumers exposure

Room size: Covers use in room size of 20 m³

Ventilation rate: Covers use under typical household ventilation.

Additional conditions human health

Covers skin contact area up to 430 cm²

8.3 Exposure estimation and reference to its source

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

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
wastewater treatment plant microbes	0.273 mg/L	N/A	0.000471
freshwater	0.0297 mg/L	N/A	0.0309
freshwater sediment	0.114 mg/kg bw/day	N/A	0.031
marine water	0.00304 mg/L	N/A	0.00385
marine sediment	0.0116 mg/kg bw/day	N/A	0.00383
soil	0.116 mg/kg bw/day	N/A	0.00676

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	111 mg/m ³	N/A	0.973
inhalative, local, short-term	111 mg/m ³	N/A	0.973
dermal, systemic, long-term	3.28 mg/kg bw/day	N/A	0.0159
combined routes, systemic, long-term	N/A	N/A	0.989

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	0.788 mg/m ³	N/A	0.00682
inhalative, local, short-term	47.3 mg/m ³	N/A	0.414
dermal, systemic, long-term	1.4 mg/kg bw/day	N/A	0.000112
combined routes, systemic, long-term	N/A	N/A	0.212

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
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inhalative, systemic, long-term	23.5 mg/m ³	N/A	0.206
inhalative, local, short-term	23.5 mg/m ³	N/A	0.206
dermal, systemic, long-term	1.4 mg/kg bw/day	N/A	0.00679
combined routes, systemic, long-term	N/A	N/A	0.212

8.2. CS5: Consumer Contributing Scenario: Consumer (PC3)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	38.7 mg/m ³	N/A	0.339
inhalative, local, short-term	38.7 mg/m ³	N/A	0.339
dermal, systemic, long-term	7.51 mg/kg bw/day	N/A	0.0364
combined routes, systemic, long-term	N/A	N/A	0.375

8.2. CS6: Consumer Contributing Scenario: Consumer (PC3)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	17.1 mg/m ³	N/A	0.15
inhalative, local, short-term	17.1 mg/m ³	N/A	0.15
dermal, systemic, long-term	0.469 mg/kg bw/day	N/A	0.00227
combined routes, systemic, long-term	N/A	N/A	0.152

8.2. CS7: Consumer Contributing Scenario: Consumer (PC8)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	0.672 mg/m ³	N/A	0.00589
inhalative, local, short-term	0.672 mg/m ³	N/A	0.00589
dermal, systemic, long-term	5.63 mg/kg bw/day	N/A	0.000273
combined routes, systemic, long-term	N/A	N/A	0.00616

8.2. CS8: Consumer Contributing Scenario: Consumer (PC8)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	0.543 mg/m ³	N/A	0.00476
inhalative, local, short-term	1.55 mg/m ³	N/A	0.0135

dermal, systemic, long-term	5.63 mg/kg bw/day	N/A	0.00956
combined routes, systemic, long-term	N/A	N/A	0.0231

8.2. CS9: Consumer Contributing Scenario: Consumer (PC8)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	0.885 mg/m ³	N/A	0.00776
inhalative, local, short-term	2.52 mg/m ³	N/A	0.0221
dermal, systemic, long-term	8.43 mg/kg bw/day	N/A	0.0143
combined routes, systemic, long-term	N/A	N/A	0.0364

8.2. CS10: Consumer Contributing Scenario: Consumer (PC18)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	86 mg/m ³	N/A	0.754
inhalative, local, short-term	86 mg/m ³	N/A	0.754
dermal, systemic, long-term	4.69 mg/kg bw/day	N/A	0.0227
combined routes, systemic, long-term	N/A	N/A	0.777

8.2. CS11: Consumer Contributing Scenario: Consumer (PC23)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	3.62 mg/m ³	N/A	0.0317
inhalative, local, short-term	45.3 mg/m ³	N/A	0.397
dermal, systemic, long-term	28.2 mg/kg bw/day	N/A	0.0109
combined routes, systemic, long-term	N/A	N/A	0.408

8.2. CS12: Consumer Contributing Scenario: Consumer (PC23)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	0.136 mg/m ³	N/A	0.00119
inhalative, local, short-term	6.24 mg/m ³	N/A	0.0547
dermal, systemic, long-term	1.23 mg/kg bw/day	N/A	6.5E-05
combined routes, systemic, long-term	N/A	N/A	0.0295

8.2. CS13: Consumer Contributing Scenario: Consumer (PC24)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	0.0368 mg/m ³	N/A	0.000322
inhalative, local, short-term	3.36 mg/m ³	N/A	0.0294
dermal, systemic, long-term	1.23 mg/kg bw/day	N/A	6.5E-05
combined routes, systemic, long-term	N/A	N/A	0.0295

8.2. CS14: Consumer Contributing Scenario: Consumer (PC27)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	15.7 mg/m ³	N/A	0.137
inhalative, local, short-term	15.7 mg/m ³	N/A	0.137
dermal, systemic, long-term	11.2 mg/kg bw/day	N/A	0.0543
combined routes, systemic, long-term	N/A	N/A	0.226
oral, systemic, long-term	131.2 mg/kg bw/day	N/A	0.0344

8.2. CS15: Consumer Contributing Scenario: Consumer (PC31)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	3.62 mg/m ³	N/A	0.0317
inhalative, local, short-term	45.3 mg/m ³	N/A	0.397
dermal, systemic, long-term	28.2 mg/kg bw/day	N/A	0.0109
combined routes, systemic, long-term	N/A	N/A	0.408

8.2. CS16: Consumer Contributing Scenario: Consumer (PC31)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	0.0684 mg/m ³	N/A	0.0006
inhalative, local, short-term	3.12 mg/m ³	N/A	0.0273
dermal, systemic, long-term	5.65 mg/kg bw/day	N/A	0.000597
combined routes, systemic, long-term	N/A	N/A	0.0279

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

Guidance to check compliance with the exposure scenario:

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

Exposure Scenario, 01/06/2021

Substance identity	
Chemical name	3-butossi-2-propanolo
CAS No.	5131-66-8
EINECS No.	225-878-4

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2. **ES 2** Widespread use by professional workers
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1. ES 1 Use at industrial site	
1.1 TITLE SECTION	
Exposure Scenario name	Use in cleaning agents
Date - Version	01/06/2021 - 1.0
Life Cycle Stage	Use at industrial site
Main user group	Industrial uses
Sector(s) of use	Industrial uses (SU3)
Environment Contributing Scenario	
CS1 Covered by	ERC4
Worker Contributing Scenario	
CS2 Industrial	PROC1 - PROC2 - PROC3 - PROC4 - PROC7 - PROC8a - PROC8b - PROC10 - PROC13
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)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid	
Concentration of substance in product: Covers percentage substance in the product up to 100 %.	
<i>Amount used, frequency and duration of use (or from service life)</i>	
Amounts used: Daily amount per site 3281 tonnes/day	
Release type: Continuous release	
Emission days: 20 days per year	
<i>Technical and organisational conditions and measures</i>	
Control measures to prevent releases	
Filtration	Water - minimum efficiency of: 87.4 %
<i>Conditions and measures related to sewage treatment plant</i>	
STP type: Municipal Sewage Treatment Plant	
STP effluent (m³/day): 2000	
<i>Conditions and measures related to treatment of waste (including article waste)</i>	
Waste treatment Dispose of waste product or used containers according to local regulations. Incineration, disposal or recycling at specific offsite provider	
<i>Other conditions affecting environmental exposure</i>	

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:

Use in closed process Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases.

1.2. 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

Concentration of substance in product:

Covers percentage substance in the product up to 25 %.

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

No other specific measures identified.

Ensure operatives are trained to minimise exposures.

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Ensure control measures are regularly inspected and maintained.

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: Covers use at ambient temperatures.

1.3 Exposure estimation and reference to its source

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

Additional information on exposure estimation:

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

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

Additional information on exposure estimation:

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

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 cleaning agents
Date - Version	01/06/2021 - 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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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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Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

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

Amounts used:

Daily amount per site 3821 kg/day

Release type: Continuous release

Emission days: 365 days per year

Technical and organisational conditions and measures

Control measures to prevent releases

Filtration	Water - minimum efficiency of: 87.4 %
Wet scrubber for elimination of volatile components from waste gases	

Conditions and measures related to sewage treatment plant

STP type:

Municipal Sewage Treatment Plant

STP effluent (m³/day): 2000

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

Waste treatment Incineration, disposal or recycling at specific offsite provider Dispose of waste product or used containers according to local regulations.	
<i>Other conditions affecting environmental exposure</i>	
Local marine water dilution factor: 100 Local freshwater dilution factor: 10	
<i>Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.</i>	
Additional Good Practice Advice: Use in closed process	
2.2. 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)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid	
Concentration of substance in product: Covers percentage substance in the product up to 25 %.	
<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 Ensure operatives are trained to minimise exposures. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection Wear suitable gloves tested to EN374 and sleeves. For further specification, refer to section 8 of the SDS Wear suitable gloves tested to EN374. Wear a respirator conforming to EN140.	
<i>Other conditions affecting worker exposure</i>	
Temperature: Covers use at ambient temperatures.	
2.3 Exposure estimation and reference to its source	
2.3. CS1: Environment Contributing Scenario: Covered by (ERC8a, ERC8d)	
Additional information on exposure estimation: ECETOC TRA reduction factor for local exhaust ventilation (LEV) has not been used for the calculation of dermal exposure estimates. Predicted exposures are not expected to exceed the applicable consumer reference values when the operational conditions/risk management measures given in section 2 are implemented.	
2.3. CS2: Worker Contributing Scenario: General use from professional operators (PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC10, PROC11, PROC13)	
Additional information on exposure estimation: ECETOC TRA reduction factor for local exhaust ventilation (LEV) has not been used for the calculation of dermal exposure estimates.	

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; Washing and cleaning products (PC35)

3.1 TITLE SECTION

Exposure Scenario name	Use in cleaning agents
Date - Version	01/06/2021 - 1.0
Life Cycle Stage	Consumer use
Main user group	Consumer uses
Sector(s) of use	Consumer uses (SU21)
Product Categories	Washing and cleaning products (PC35)

Environment Contributing Scenario

CS1 Covered by	ERC8a - ERC8d
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Consumer Contributing Scenario

CS2 Detergent liquids	PC35
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3.2 Conditions of use affecting exposure

3.2. 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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Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers percentage substance in the product up to 5 %.

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

Amounts used:

Daily amount per site 285 kg/day

Release type: Continuous release

Emission days: 365 days per year

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

Waste treatment

Dispose of waste product or used containers according to local regulations.

Other conditions affecting environmental exposure

Local marine water dilution factor: 100

Local freshwater dilution factor: 10

Receiving surface water flow: 2000 m³/day

3.2. CS2: Consumer Contributing Scenario: Detergent liquids (PC35)

Product Categories	Washing and cleaning products (PC35)
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Product (article) characteristics

Physical form of product:

Liquid

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 16 g

Duration:

Covers exposure up to 1 h/day

Frequency:

Covers exposure up to 365 days per year

Other conditions affecting consumers exposure

Indoor use

Room size: Covers use in room size of 15 m³

Ventilation rate: Covers use under typical household ventilation.

3.3 Exposure estimation and reference to its source

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

Additional information on exposure estimation:

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

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.

Exposure Scenario, 08/02/2024

Substance identity	
Chemical name	Alcohols, C12-14, ethoxylated, sulfates, sodium salts 1-2,5 moles ethoxylated
CAS No.	68891-38-3
EINECS No.	500-234-8

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1. ES 1 Use at industrial site	
1.1 TITLE SECTION	
Exposure Scenario name	Car care and maintenance products
Date - Version	08/02/2024 - 2.0
Life Cycle Stage	Use at industrial site
Main user group	Industrial uses
Sector(s) of use	Industrial uses (SU3)
Environment Contributing Scenario	
CS1 Covered by	ERC4
Worker Contributing Scenario	
CS2 Industrial	PROC10
CS3 Industrial	PROC8a
CS4 Industrial	PROC4
CS5 Industrial	PROC7
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)
<i>Amount used, frequency and duration of use (or from service life)</i>	
Amounts used: Annual site tonnage 10 t(onnes)/year Release type: Continuous release Emission days: 20 days per year	
<i>Conditions and measures related to sewage treatment plant</i>	
STP type: Municipal Sewage Treatment Plant STP effluent (m³/day): 18000	
<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.	
<i>Other conditions affecting environmental exposure</i>	
Local marine water dilution factor: 100 Local freshwater dilution factor: 10	

Receiving surface water flow: 2000 m³/h

1.2. CS2: Worker Contributing Scenario: Industrial (PROC10)

Process Categories	Roller application or brushing (PROC10)
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Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers percentage substance in the product up to 25 %.

Amount used, frequency and duration of use/exposure

Duration:

Application duration > 4 h

Frequency:

Covers use up to 5 days per week

Other conditions affecting worker exposure

Indoor use
Industrial use

Additional conditions human health

Covers skin contact area up to 960 cm²

1.2. CS3: Worker Contributing Scenario: Industrial (PROC8a)

Process Categories	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a)
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Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers percentage substance in the product up to 25 %.

Amount used, frequency and duration of use/exposure

Duration:

Application duration > 4 h

Frequency:

Covers use up to 5 days per week

Other conditions affecting worker exposure

Indoor use
Industrial use

Additional conditions human health

Covers skin contact area up to 960 cm²

1.2. CS4: Worker Contributing Scenario: Industrial (PROC4)

Process Categories	Chemical production where opportunity for exposure arises (PROC4)
---------------------------	---

Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers percentage substance in the product up to 25 %.

Amount used, frequency and duration of use/exposure

Duration:

Application duration > 4 h

Frequency:

Covers use up to 5 days per week

Other conditions affecting worker exposure

Indoor use
Industrial use

Additional conditions human health

Covers skin contact area up to 480 cm²

1.2. CS5: Worker Contributing Scenario: Industrial (PROC7)

Process Categories	Industrial spraying (PROC7)
---------------------------	-----------------------------

Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers percentage substance in the product up to 5 %.

Amount used, frequency and duration of use/exposure

Duration:

Application duration <= 4 h

Frequency:

Covers use up to 5 days per week

Other conditions affecting worker exposure

Indoor use

Industrial use

Ventilation rate: 30 %

Additional conditions human health

Covers skin contact area up to 1500 cm²

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
Water	2 %	N/A
Air	0 %	N/A
soil	5 %	N/A

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
freshwater	0.116945 mg/L	N/A	0.487272
freshwater sediment	0.486471 mg/kg dry weight	N/A	0.089261
marine water	0.011676 mg/L	N/A	0.486485
marine sediment	0.048569 mg/kg dry weight	N/A	0.089117
soil	0.112922	N/A	0.015056
Sewage treatment plant	0.0632612 mg/L	N/A	7.9E-06

1.3. CS2: Worker Contributing Scenario: Industrial (PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	27.429 mg/kg bw/day	N/A	0.009974
inhalative, systemic, long-term	147.917 mg/m ³	N/A	0.845238

combined routes	48.56 mg/kg bw/day	N/A	0.855212
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1.3. CS3: Worker Contributing Scenario: Industrial (PROC8a)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	13.714 mg/kg bw/day	N/A	0.004987
inhalative, systemic, long-term	1.479 mg/m ³	N/A	0.008452
combined routes	13.926 mg/kg bw/day	N/A	0.013439

1.3. CS4: Worker Contributing Scenario: Industrial (PROC4)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	8.571 mg/kg bw/day	N/A	0.003117
inhalative, systemic, long-term	124.25 mg/m ³	N/A	0.71
combined routes	26.321 mg/kg bw/day	N/A	0.713117

1.3. CS5: Worker Contributing Scenario: Industrial (PROC7)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	8.571 mg/kg bw/day	N/A	0.003117
inhalative, systemic, long-term	124.25 mg/m ³	N/A	0.71
combined routes	26.321 mg/kg bw/day	N/A	0.713117

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	Car care and maintenance products
Date - Version	08/02/2024 - 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
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Worker Contributing Scenario

CS2 Covered by	PROC8a
CS3 Covered by	PROC4
CS4 Covered by	PROC10
CS5 Covered by	PROC11
CS6 Covered by	PROC11

2.2 Conditions of use affecting exposure

2.2. CS1: Environment Contributing Scenario: Covered by (ERC8a)

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

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

Amounts used:

Annual site tonnage 300 t(tonnes)/year
Daily amount per site 1644 kg/day

Release type: Continuous release

Emission days: 365 days per year

Technical and organisational conditions and measures

Control measures to prevent releases

	Air - minimum efficiency of: 100 % Water - minimum efficiency of: 100 %
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Other conditions affecting environmental exposure

Local marine water dilution factor: 100

Local freshwater dilution factor: 10

2.2. CS2: Worker Contributing Scenario: Covered by (PROC8a)

Process Categories	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a)
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Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers percentage substance in the product up to 25 %.

Amount used, frequency and duration of use/exposure

Duration:

Covers use up to > 4 h

Frequency:

Use frequency 5 days per week

Other conditions affecting worker exposure

Indoor use

Professional use

Additional conditions human health

Covers skin contact area up to 960 cm²

2.2. CS3: Worker Contributing Scenario: Covered by (PROC4)

Process Categories	Chemical production where opportunity for exposure arises (PROC4)
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Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers percentage substance in the product up to 25 %.

Amount used, frequency and duration of use/exposure

Duration:

Covers use up to > 4 h

Frequency:

Use frequency 5 days per week

Other conditions affecting worker exposure

Indoor use
Professional use

Additional conditions human health

Covers skin contact area up to 480 cm²

2.2. CS4: Worker Contributing Scenario: Covered by (PROC10)

Process Categories	Roller application or brushing (PROC10)
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Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers concentrations up to 5 %

Amount used, frequency and duration of use/exposure

Duration:

Covers use up to > 4 h

Frequency:

Use frequency 5 days per week

Other conditions affecting worker exposure

Indoor use
Professional use

Additional conditions human health

Covers skin contact area up to 960 cm²

2.2. CS5: Worker Contributing Scenario: Covered by (PROC11)

Process Categories	Non industrial spraying (PROC11)
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Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers concentrations up to 5 %

Amount used, frequency and duration of use/exposure

Duration:

Covers use up to > 4 h

Frequency:

Use frequency 5 days per week

Other conditions affecting worker exposure

Indoor use

Professional use

Ventilation rate: 30 %

Additional conditions human health

Covers skin contact area up to 1500 cm²

2.2. CS6: Worker Contributing Scenario: Covered by (PROC11)

Process Categories

Non industrial spraying (PROC11)

Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers concentrations up to 5 %

Amount used, frequency and duration of use/exposure

Duration:

Covers use up to > 4 h

Frequency:

Use frequency 5 days per week

Other conditions affecting worker exposure

Indoor use

Professional use

Ventilation rate: 30 %

Additional conditions human health

Covers skin contact area up to 1500 cm²

2.3 Exposure estimation and reference to its source

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

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
freshwater	0.064084 mg/L	N/A	0.267015
freshwater sediment	0.266576 mg/kg dry weight	N/A	0.048913

marine water	0.006389 mg/L	N/A	0.266228
marine sediment	0.026579 mg/kg dry weight	N/A	0.048769
soil	0.106749 mg/kg dry weight	N/A	0.014233
Sewage treatment plant	0.103991 mg/L	N/A	1E-05

2.3. CS2: Worker Contributing Scenario: Covered by (PROC8a)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	13.714 mg/kg dry weight	N/A	0.004987
inhalative, systemic, long-term	1.479 mg/m ³	N/A	0.008452
combined routes	13.926 mg/kg dry weight	N/A	0.013439

2.3. CS3: Worker Contributing Scenario: Covered by (PROC4)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	6.857 mg/kg dry weight	N/A	0.002494
inhalative, systemic, long-term	1.479 mg/m ³	N/A	0.008452
combined routes	7.068 mg/kg dry weight	N/A	0.010946

2.3. CS4: Worker Contributing Scenario: Covered by (PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	5.486 mg/kg dry weight	N/A	0.001995
inhalative, systemic, long-term	73.958 mg/m ³	N/A	0.422619
combined routes	16.051 mg/kg dry weight	N/A	0.424614

2.3. CS5: Worker Contributing Scenario: Covered by (PROC11)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	21.429 mg/kg dry weight	N/A	0.007792

inhalative, systemic, long-term	59.167 mg/m ³	N/A	0.338095
combined routes	29.881 mg/kg dry weight	N/A	0.345887

2.3. CS6: Worker Contributing Scenario: Covered by (PROC11)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	21.429 mg/kg dry weight	N/A	0.007792
inhalative, systemic, long-term	124.25 mg/m ³	N/A	0.71
combined routes	39.179 mg/kg dry weight	N/A	0.717792

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 Widespread use by professional workers

3.1 TITLE SECTION

Exposure Scenario name	Professional use of dishwash products
Date - Version	08/02/2024 - 3.0
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
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Worker Contributing Scenario

CS2 General use from professional operators	PROC8b
CS3 General use from professional operators	PROC1
CS4 General use from professional operators	PROC8a
CS5 General use from professional operators	PROC2
CS6 General use from professional operators	PROC10
CS7 General use from professional operators	PROC10

3.2 Conditions of use affecting exposure

3.2. CS1: Environment Contributing Scenario: Covered by (ERC8a)

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

Amounts used:

Daily amount per site 300 t(tonnes)/year
Daily amount per site 1644 kg/day

Release type: Continuous release

Emission days: 365 days per year

Conditions and measures related to sewage treatment plant

STP type:

Municipal Sewage Treatment Plant

STP effluent (m³/day): 18000

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.

Other conditions affecting environmental exposure

Local marine water dilution factor: 100

Local freshwater dilution factor: 10

Receiving surface water flow: 2000 m³/day

3.2. CS2: Worker Contributing Scenario: General use from professional operators (PROC8b)

Process Categories	Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b)
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Product (article) characteristics

Concentration of substance in product:

Covers percentage substance in the product up to 25 %.

Amount used, frequency and duration of use/exposure

Duration:

Application duration > 4 h

Frequency:

Covers frequency up to: 5 days per week

Other conditions affecting worker exposure

Indoor use

Professional use

Additional conditions human health

Covers skin contact area up to 960 cm²

3.2. CS3: 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

Concentration of substance in product:

Covers percentage substance in the product up to 25 %.

Amount used, frequency and duration of use/exposure

Duration:

Application duration > 4 h

Frequency:

Covers frequency up to: 5 days per week

Other conditions affecting worker exposure

Indoor use

Professional use

Additional conditions human healthCovers skin contact area up to 240 cm²**3.2. CS4: Worker Contributing Scenario: General use from professional operators (PROC8a)****Process Categories**

Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a)

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

Covers percentage substance in the product up to 25 %.

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

Application duration > 4 h

Frequency:

Covers frequency up to: 5 days per week

Other conditions affecting worker exposure

Indoor use

Professional use

Additional conditions human healthCovers skin contact area up to 960 cm²**3.2. CS5: 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***Concentration of substance in product:**

Covers percentage substance in the product up to 25 %.

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

Application duration > 4 h

Frequency:

Covers frequency up to: 5 days per week

Other conditions affecting worker exposure

Indoor use

Professional use

Additional conditions human healthCovers skin contact area up to 480 cm²**3.2. CS6: Worker Contributing Scenario: General use from professional operators (PROC10)****Process Categories**

Roller application or brushing (PROC10)

Product (article) characteristics

Concentration of substance in product:

Covers percentage substance in the product up to 25 %.

Amount used, frequency and duration of use/exposure

Duration:

Application duration <= 4 h

Frequency:

Covers frequency up to: 5 days per week

Other conditions affecting worker exposure

Indoor use

Professional use

Additional conditions human health

Covers skin contact area up to 960 cm²

3.2. 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

Concentration of substance in product:

Covers percentage substance in the product up to 25 %.

Amount used, frequency and duration of use/exposure

Duration:

Exposure duration 15 min/h

Frequency:

Covers frequency up to: 5 days per week

Other conditions affecting worker exposure

Indoor use

Professional use

Additional conditions human health

Covers skin contact area up to 960 cm²

3.3 Exposure estimation and reference to its source

3.3. CS1: Environment Contributing Scenario: Covered by (ERC8a)

Release route	Release rate	Release estimation method
Water	100 %	N/A
Air	100 %	N/A
soil	0 %	N/A

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
freshwater	0.064084 mg/L	N/A	6.156
freshwater sediment	mg/kg dry weight	N/A	33.607
marine water	0.006389 mg/L	N/A	6.175
marine sediment	0.026579	N/A	33.707
soil	0.106749 mg/kg dry weight	N/A	0.014233
Sewage treatment plant	0.103991 mg/L	N/A	1E-05

3.3. CS2: Worker Contributing Scenario: General use from professional operators (PROC8b)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	13.714 mg/kg bw/day	N/A	0.004987
inhalative, systemic, long-term	1.479 mg/m ³	N/A	0.008452
combined routes	13.926 mg/kg bw/day	N/A	0.013439

3.3. CS3: Worker Contributing Scenario: General use from professional operators (PROC1)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	0.034286 mg/kg bw/day	N/A	1.2E-05
inhalative, systemic, long-term	0.147917 mg/m ³	N/A	0.000845
combined routes	0.055417 mg/kg bw/day	N/A	0.000858

3.3. CS4: Worker Contributing Scenario: General use from professional operators (PROC8a)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	13.714 mg/kg bw/day	N/A	0.004987
inhalative, systemic, long-term	1.479 mg/m ³	N/A	0.008452
combined routes	13.926 mg/kg bw/day	N/A	0.013439

3.3. CS5: Worker Contributing Scenario: General use from professional operators (PROC2)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	1.371 mg/kg bw/day	N/A	0.000499
inhalative, systemic, long-term	1.479 mg/m ³	N/A	0.008452
combined routes	1.583 mg/kg bw/day	N/A	0.008951

3.3. CS6: 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	16.457 mg/kg bw/day	N/A	0.005984
inhalative, systemic, long-term	133.125 mg/m ³	N/A	0.760714
combined routes	35.475 mg/kg bw/day	N/A	0.766699

3.3. 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	16.457 mg/kg bw/day	N/A	0.005984
inhalative, systemic, long-term	44.375 mg/m ³	N/A	0.253571
combined routes	22.796 mg/kg bw/day	N/A	0.259556

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

Consumer use; Washing and cleaning products (PC35)

4.1 TITLE SECTION

Exposure Scenario name	Cleaning agent
Date - Version	08/02/2024 - 2.0
Life Cycle Stage	Consumer use
Main user group	Consumer uses
Sector(s) of use	Consumer uses (SU21)
Product Categories	Washing and cleaning products (PC35)

Environment Contributing Scenario

CS1 Covered by	ERC8a
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Consumer Contributing Scenario

CS2 Consumer	PC35
CS3 Consumer	PC35
CS4 Consumer	PC35

4.2 Conditions of use affecting exposure

4.2. CS1: Environment Contributing Scenario: Covered by (ERC8a)

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

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

Amounts used:

Daily amount per site 1644 kg/day

Release type: Continuous release

Emission days: 365 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.

Other conditions affecting environmental exposure

Local marine water dilution factor: 100

Local freshwater dilution factor: 10

Receiving surface water flow: 18000 m³/day

4.2. CS2: Consumer Contributing Scenario: Consumer (PC35)

Product Categories	Washing and cleaning products (PC35)
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Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers concentrations up to 50 %

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 250 g

Duration:

Exposure duration 0.33 h

Frequency:

Covers use up to 1 uses per day

Other conditions affecting consumers exposure

Room size: Covers use in room size of 20 m³

Body parts exposed:

Assumes that potential dermal contact is limited to hands.

4.2. CS3: Consumer Contributing Scenario: Consumer (PC35)

Product Categories

Washing and cleaning products (PC35)

Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers concentrations up to 60 %

Amount used, frequency and duration of use/exposure

Amounts used:

Amount per use 50 g

Duration:

Exposure duration 1 h								
Frequency:								
Covers use up to 1 uses per day								
<i>Other conditions affecting consumers exposure</i>								
Room size: Covers use in room size of 20 m ³								
Body parts exposed:								
Assumes that potential dermal contact is limited to hands.								
4.2. CS4: Consumer Contributing Scenario: Consumer (PC35)								
Product Categories	Washing and cleaning products (PC35)							
<i>Product (article) characteristics</i>								
Physical form of product:								
Liquid								
Concentration of substance in product:								
Covers concentrations up to 10 %								
<i>Amount used, frequency and duration of use/exposure</i>								
Amounts used:								
Amount per use 35 g								
Duration:								
Exposure duration 4 h								
Frequency:								
Covers use up to 1 uses per day								
<i>Other conditions affecting consumers exposure</i>								
Room size: Covers use in room size of 20 m ³								
Body parts exposed:								
Assumes that potential dermal contact is limited to hands.								
4.3 Exposure estimation and reference to its source								
4.3. CS1: Environment Contributing Scenario: Covered by (ERC8a)								
<table border="1"> <tr> <td>Release route</td> <td>Release rate</td> <td>Release estimation method</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>			Release route	Release rate	Release estimation method			
Release route	Release rate	Release estimation method						

Air	100 %	N/A
Water	100 %	N/A
soil	0 %	N/A

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
freshwater	0.064084 mg/L	N/A	0.267015
freshwater sediment	0.266576 mg/kg dry weight	N/A	0.048913
marine water	0.006389 mg/L	N/A	0.266228
marine sediment	0.026579 mg/kg dry weight	N/A	0.048769
soil	0.106749 mg/kg dry weight	N/A	0.014233
Sewage treatment plant	0.103991 mg/L	N/A	1E-05

4.2. CS2: Consumer Contributing Scenario: Consumer (PC35)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	71458 mg/kg bw/day	ECETOC TRA consumer v3	0.043308
inhalative, systemic, long-term	0.001433 mg/m ³	ECETOC TRA consumer v3	2.8E-05
combined routes	71.458 mg/kg bw/day	ECETOC TRA consumer v3	0.043336

4.2. CS3: Consumer Contributing Scenario: Consumer (PC35)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	85.75 mg/kg bw/day	ECETOC TRA consumer v3	0.05197
inhalative, systemic, long-term	0.001433 mg/m ³	ECETOC TRA consumer v3	2.8E-05
combined routes	85.75 mg/kg bw/day	ECETOC TRA consumer v3	0.051997

4.2. CS4: Consumer Contributing Scenario: Consumer (PC35)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	14.292 mg/kg bw/day	ECETOC TRA consumer v3	0.008662
inhalative, systemic, long-term	51.471 mg/m ³	ECETOC TRA consumer v3	0.989819
combined routes	18.996 mg/kg bw/day	ECETOC TRA consumer v3	0.998481

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.