

Ficha de datos de seguridad

ELIMINA GHIACCIO



Ficha de datos de seguridad del 21/9/2021, Revisión 7

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: ELIMINA GHIACCIO

Código comercial: 8468

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

Uso recomendado:

Líquido descongelante.

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

Proveedor:

Arexons S.p.A.

via Antica di Cassano, 23, 20063

Cernusco sul Naviglio (MI), Italy

Arexons S.p.A.

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

Persona competente responsable de la ficha de datos de seguridad:

arexons@arexons.it

1.4. Teléfono de emergencia

Arexons S.p.A.

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

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

SECCIÓN 2. Identificación de los peligros

2.1. Clasificación de la sustancia o de la mezcla

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

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

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

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

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

Ningún otro riesgo

2.2. Elementos de la etiqueta

Pictogramas de peligro:



Peligro

Indicaciones de peligro:

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

H319 Provoca irritación ocular grave.

H336 Puede provocar somnolencia o vértigo.

Consejos de prudencia:

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

P102 Mantener fuera del alcance de los niños.

P103 Leer atentamente y seguir todas las instrucciones.

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

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P211 No pulverizar sobre una llama abierta u otra fuente de ignición.
P251 No perforar ni quemar, incluso después de su uso.
P271 Utilizar únicamente en exteriores o en un lugar bien ventilado.
P305+P351+P338 EN CASO DE CONTACTO CON LOS OJOS: Enjuagar con agua cuidadosamente durante varios minutos. Quitar las lentes de contacto cuando estén presentes y pueda hacerse con facilidad. Proseguir con el lavado.
P312 Llamar a un CENTRO DE TOXICOLOGIA si la persona se encuentra mal.
P405 Guardar bajo llave.
P410+P412 Proteger de la luz del sol. No exponer a temperaturas superiores a 50 °C/122°F.
P501 Eliminar el contenido/el recipiente en conformidad con la reglamentación.

Disposiciones especiales:

Ninguna

Contiene

Propan-2-ol; alcohol isopropílico; isopropanol

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

Ninguna

2.3. Otros peligros

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

Otros riesgos:

Ningún otro riesgo

SECCIÓN 3. Composición/información sobre los componentes

3.1. Sustancias

N.A.

3.2. Mezclas

Componentes peligrosos según el Reglamento CLP y su correspondiente clasificación:

$\geq 80\%$ - $< 90\%$ Propan-2-ol; alcohol isopropílico; isopropanol

REACH No.: 01-2119457558-25, Número Index: 603-117-00-0, CAS: 67-63-0, EC: 200-661-7

⚠ 2.6/2 Flam. Liq. 2 H225

⚠ 3.3/2 Eye Irrit. 2 H319

⚠ 3.8/3 STOT SE 3 H336

$\geq 7\%$ - $< 10\%$ Etanodiol; etilenglicol

REACH No.: 01-2119456816-28, Número Index: 603-027-00-1, CAS: 107-21-1, EC: 203-473-3

⚠ 3.1/4/Oral Acute Tox. 4 H302

⚠ 3.9/2 STOT RE 2 H373

$\geq 3\%$ - $< 5\%$ Dióxido de carbono líquido refrigerado

CAS: 124-38-9, EC: 204-696-9

⚠ 2.5/RL Press Gas (Ref. Liq.) H281

SECCIÓN 4. Primeros auxilios

4.1. Descripción de los primeros auxilios

En caso de contacto con la piel:

Quítese inmediatamente la ropa contaminada.

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

Lavar completamente el cuerpo (ducha o baño).

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

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

En caso de contacto con los ojos:

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

Proteger el ojo ileso.

En caso de ingestión:

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

En caso de inhalación:

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

4.2. Principales síntomas y efectos, agudos y retardados

Ninguno

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

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

Tratamiento:

Ninguno

SECCIÓN 5. Medidas de lucha contra incendios

5.1. Medios de extinción

Medios de extinción apropiados:

Con anhídrido carbónico.

Con polvo.

Espuma para alcoholes

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

Utilizar equipos respiratorios apropiados.

Recoger por separado el agua contaminada utilizada para extinguir el incendio. No descargarla en la red de alcantarillado.

Si es posible, desde el punto de vista de la seguridad, retirar de inmediato del área los contenedores no dañados.

SECCIÓN 6. Medidas en caso de vertido accidental

6.1. Precauciones personales, equipo de protección y procedimientos de emergencia

Usar los dispositivos de protección individual.

Quitar toda fuente de encendido.

Llevar las personas a un lugar seguro.

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

6.2. Precauciones relativas al medio ambiente

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

Conservar el agua de lavado contaminada y eliminarla.

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

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

6.3. Métodos y material de contención y de limpieza

Lavar con abundante agua.

6.4. Referencia a otras secciones

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Véanse también los apartados 8 y 13.

SECCIÓN 7. Manipulación y almacenamiento

7.1. Precauciones para una manipulación segura

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

La indumentaria contaminada debe ser sustituida antes de acceder a las áreas de almuerzo.
No comer ni beber durante el trabajo.

7.2. Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades

Debe almacenarse a temperaturas inferiores a 50 °C. Manténgase alejado de llamas libres y fuentes de calor. Evite la exposición directa al sol.
Manténgase alejado de llamas libres, chispas y fuentes de calor. Evite la exposición directa al sol.
Mantener alejado de comidas, bebidas y piensos.
Ninguna en particular.
Indicaciones para los locales:
Frescos y adecuadamente aireados.

7.3. Usos específicos finales

Ningún uso particular

SECCIÓN 8. Controles de exposición/protección individual

8.1. Parámetros de control

Propan-2-ol; alcohol isopropílico; isopropanol - CAS: 67-63-0
20101.11 - TWA: 983 mg/m³, 400 ppm
20101.12 - TWA: 492 mg/m³, 200 ppm
ACGIH - TWA(8h): 200 ppm - STEL: 400 ppm - Notas: A4, BEI - Eye and URT irr, CNS impair
Etanodiol; etilenglicol - CAS: 107-21-1
UE - TWA(8h): 52 mg/m³, 20 ppm - STEL: 104 mg/m³, 40 ppm - Notas: Skin
ACGIH - TWA(8h): 25 ppm - STEL: 50 ppm - Notas: (V), A4 - URT irr
ACGIH - STEL: 10 mg/m³ - Notas: (I, H), A4 - URT irr
Diosido di carbonio liquido refrigerato - CAS: 124-38-9
UE - TWA(8h): 9000 mg/m³, 5000 ppm
ACGIH - TWA(8h): 5000 ppm - STEL: 30000 ppm - Notas: Asphyxia

Valores límites de exposición DNEL

Propan-2-ol; alcohol isopropílico; isopropanol - CAS: 67-63-0
Trabajador profesional: 888 mg/kg - Consumidor: 319 mg/kg - Exposición: Dérmica humana - Frecuencia: A largo plazo (repetida)
Trabajador profesional: 500 mg/m³ - Consumidor: 89 mg/m³ - Exposición: Por inhalación humana - Frecuencia: A largo plazo (repetida)
Consumidor: 26 mg/kg - Exposición: Oral humana - Frecuencia: A largo plazo (repetida)

Valores límites de exposición PNEC

Propan-2-ol; alcohol isopropílico; isopropanol - CAS: 67-63-0
Objetivo: agua dulce - Valor: 140.9 mg/l
Objetivo: agua dulce - Valor: 140.9 mg/l
Objetivo: Sedimentos de agua dulce - Valor: 552 mg/l
Objetivo: Suelo (agricultura) - Valor: 28 mg/kg
Objetivo: Microorganismos en aguas residuales - Valor: 2251 mg/l

8.2. Controles de la exposición

Protección de los ojos:

Gafas con protección lateral.

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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.

Protección respiratoria:
Utilizar una protección respiratoria adecuada.

Riesgos térmicos:
Ninguno

Controles de la exposición ambiental:
Ninguno

Controles técnicos apropiados:
Ninguno

SECCIÓN 9. Propiedades físicas y químicas

9.1. Información sobre propiedades físicas y químicas básicas

Propiedad	Valor	Método:	Notas
Estado físico:	Líquido	--	--
Color:	incolore	--	--
Olor:	característico	--	--
Punto de fusión/punto de congelación:	N.A.	--	--
Punto de ebullición o punto inicial de ebullición e intervalo de ebullición:	82.4°C	--	--
Inflamabilidad:	N.A.	--	--
Límite superior e inferior de explosividad:	N.A.	--	--
Punto de ignición (flash point, fp):	12 °C	--	--
Temperatura de autoencendido:	N.A.	--	--
Temperatura de descomposición:	N.A.	--	--
pH:	N.A.	--	--
Viscosidad cinemática:	N.A.	--	--
Hidrosolubilidad:	N.A.	--	--
Solubilidad en aceite:	N.A.	--	--
Coefficiente de reparto n-octanol/agua (valor logarítmico):	N.A.	--	--

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Presión de vapor:	N.A.	--	--
Densidad y/o densidad relativa:	0.81 g/cm ³	--	--
Densidad de vapor relativa:	N.A.	--	--
Características de las partículas:			
Tamaño de las partículas:	N.A.	--	--

9.2. Otros datos

Ninguna otra información relevante

SECCIÓN 10. Estabilidad y reactividad

10.1. Reactividad

Estable en condiciones normales

10.2. Estabilidad química

Estable en condiciones normales

10.3. Posibilidad de reacciones peligrosas

Ninguno

10.4. Condiciones que deben evitarse

Estable en condiciones normales.

10.5. Materiales incompatibles

Evitar el contacto con materiales oxidantes. El producto podría inflamarse.

10.6. Productos de descomposición peligrosos

Ninguno.

SECCIÓN 11. Información toxicológica

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

Información toxicológica del producto:

DE GEL SPRAY

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

El producto está clasificado: Eye Irrit. 2 H319

d) sensibilización respiratoria o cutánea

No clasificado

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

e) mutagenicidad en células germinales

No clasificado

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

f) carcinogenicidad

No clasificado

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

g) toxicidad para la reproducción

No clasificado

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

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

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El producto está clasificado: STOT SE 3 H336

- i) toxicidad específica en determinados órganos (STOT) – exposición repetida
No clasificado

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

- j) peligro de aspiración

No clasificado

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

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

Propan-2-ol; alcohol isopropílico; isopropanol - CAS: 67-63-0

- a) toxicidad aguda:

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

Ensayo: LD50 - Vía: Piel - Especies: Conejo = 16.4 ml/kg

Ensayo: LC50 - Vía: Inhalación - Especies: Rata > 10000 ppm - Duración: 6h

- g) toxicidad para la reproducción:

Ensayo: NOAEL(C) - Vía: Oral - Especies: Conejo 480 mg/kg

11.2. Información relativa a otros peligros

Propiedades de alteración endocrina:

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

SECCIÓN 12. Información ecológica

12.1. Toxicidad

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

Propan-2-ol; alcohol isopropílico; isopropanol - CAS: 67-63-0

- a) Toxicidad acuática aguda:

Parámetro: LC50 - Especies: Peces 9640 mg/l - Duración h.: 96

Parámetro: LC50 - Especies: Peces > 100 mg/l - Duración h.: 48

Parámetro: EC50 - Especies: Daphnia > 10000 mg/l - Duración h.: 48

Parámetro: EC50 - Especies: Algas > 1800 mg/l - Duración h.: 72

12.2. Persistencia y degradabilidad

Ninguno

Propan-2-ol; alcohol isopropílico; isopropanol - CAS: 67-63-0

Biodegradabilidad: Rápidamente degradable - Duración h.: .10gg - %: 70

12.3. Potencial de bioacumulación

N.A.

12.4. Movilidad en el suelo

N.A.

12.5. Resultados de la valoración PBT y mPmB

Sustancias vPvB: Ninguna - Sustancias PBT: Ninguna

12.6. Propiedades de alteración endocrina

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

12.7. Otros efectos adversos

Ninguno

SECCIÓN 13. Consideraciones relativas a la eliminación

13.1. Métodos para el tratamiento de residuos

Recuperar si es posible. Enviar a centros de eliminación autorizados o a incineración en condiciones controladas. Operar conforme con las disposiciones locales y nacionales vigentes.

SECCIÓN 14. Información relativa al transporte

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- 14.1. Número ONU o número ID
ADR-UN Number: 1950
IATA-UN Number: 1950
IMDG-UN Number: 1950
- 14.2. Designación oficial de transporte de las Naciones Unidas
ADR-Shipping Name: AEROSOLES, inflamables
IATA-Shipping Name: AEROSOLES, inflamables
IMDG-Shipping Name: AEROSOLES, inflamables
- 14.3. Clase(s) de peligro para el transporte
ADR-Class: 2
ADR - Número de identificación del peligro: -
IATA-Class: 2
IATA-Label: 2.1
IMDG-Class: 2
IMDG-Clase: 2 UN 1950
- 14.4. Grupo de embalaje
ADR-Packing Group: -
IATA-Packing group: -
IMDG-Packing group: -
- 14.5. Peligros para el medio ambiente
ADR-Contaminante ambiental: No
IMDG-Marine pollutant: No
IMDG-EmS: F-D,
S-U
- 14.6. Precauciones particulares para los usuarios
ADR-Subsidiary hazards: See SP63
ADR-S.P.: 190 327 344 625
ADR-Categoría de transporte (Código de restricción en túneles): 2 (D)
IATA-Passenger Aircraft: 203
IATA-Subsidiary hazards: See SP63
IATA-Cargo Aircraft: 203
IATA-S.P.: A145 A167 A802
IATA-ERG: 10L
IMDG-Subsidiary hazards: See SP63
IMDG-Stowage and handling: SW1 SW22
IMDG-Segregation: SG69
- 14.7. Transporte marítimo a granel con arreglo a los instrumentos de la OMI
N.A.
Limited Quantity: 1 L
Exempted Quantity: E0

SECCIÓN 15. Información reglamentaria

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

- Dir. 98/24/CE (Riesgos relacionados con los agentes químicos durante el trabajo)
- Dir. 2000/39/CE (Valores límite de exposición profesional)
- Reglamento (CE) n. 1907/2006 (REACH)
- Reglamento (CE) n. 1272/2008 (CLP)
- Reglamento (CE) n. 790/2009 (ATP 1 CLP) y (UE) n. 758/2013
- Reglamento (UE) n. 2020/878
- Reglamento (UE) n. 286/2011 (ATP 2 CLP)

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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)

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

Restricciones relacionadas con el producto:

Restricción 3

Restricción 40

Restricciones relacionadas con las sustancias contenidas:

Ninguna restricción.

Compuestos orgánicos volátiles - COV = 95.90 %

Compuestos orgánicos volátiles - COV = 959.00 g/Kg

Compuestos orgánicos volátiles - COV = 776.79 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: P3b

15.2. Evaluación de la seguridad química

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

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

Ninguna

SECCIÓN 16. Otra información

Texto de las frases utilizadas en el párrafo 3:

H225 Líquido y vapores muy inflamables.

H319 Provoca irritación ocular grave.

H336 Puede provocar somnolencia o vértigo.

H302 Nocivo en caso de ingestión.

H373 Puede provocar daños en los órganos (riñones) tras exposiciones prolongadas o repetidas por ingestión.

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

Clase y categoría de peligro	Código	Descripción
Aerosols 1	2.3/1	Aerosoles, Categoría 1
Press Gas (Ref. Liq.)	2.5/RL	Gases a presión (Gas licuado refrigerado)
Flam. Liq. 2	2.6/2	Líquidos inflamables, Categoría 2
Acute Tox. 4	3.1/4/Oral	Toxicidad aguda (oral), Categoría 4

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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
STOT RE 2	3.9/2	Toxicidad específica en determinados órganos (exposiciones repetidas), Categoría 2

La presente ficha ha sido revisada en todas sus secciones en conformidad al Reglamento 2020/878. Clasificación y procedimiento utilizado para determinar la clasificación de las mezclas con arreglo al Reglamento (CE) n° 1272/2008 [CLP]:

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

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

Principales fuentes bibliográficas:

ECDIN: Environmental Chemicals Data and Information Network, Centro Común de Investigación, Comisión de las Comunidades Europeas
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, 8ª ed., Van Nostrand Reinold

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

Esta ficha anula y sustituye toda edición precedente.

ADR:	Acuerdo europeo relativo al transporte internacional de mercancías peligrosas por carretera.
CAS:	Chemical Abstracts Service (de la American Chemical Society).
CLP:	Clasificación, etiquetado, embalaje.
DNEL:	Nivel sin efecto derivado.
EINECS:	Catálogo Europeo de Sustancias Químicas Comercializadas.
ETA:	Estimación de la toxicidad aguda
ETAmix:	Estimación de Toxicidad Aguda (Mezclas)
GefStoffVO:	Ordenanza sobre sustancias peligrosas, Alemania.
GHS:	Sistema Globalmente Armonizado de clasificación y etiquetado de productos químicos.
IATA:	Asociación de Transporte Aéreo Internacional.
IATA-DGR:	Normas aplicadas a las mercancías peligrosas por la "Asociación de Transporte Aéreo Internacional" (IATA).
ICAO:	Organización de la Aviación Civil Internacional.
ICAO-TI:	Instrucciones Técnicas de la "Organización de la Aviación Civil Internacional" (OACI).
IMDG:	Código marítimo internacional de mercancías peligrosas.
INCI:	Nomenclatura internacional de ingredientes cosméticos.

Ficha de datos de seguridad

ELIMINA GHIACCIO



KSt:	Coeficiente de explosión.
LC50:	Concentración letal para el 50% de la población expuesta.
LD50:	Dosis letal para el 50% de la población expuesta.
NA:	No aplicable
PNEC:	Concentración prevista sin efecto.
RID:	Normas relativas al transporte internacional de mercancías peligrosas por ferrocarril.
STEL:	Nivel de exposición de corta duración.
STOT:	Toxicidad específica en determinados órganos.
TLV:	Valor límite del umbral.
TWA:	Promedio ponderado en el tiempo
WGK:	Clase de peligro para las aguas (Alemania).

Exposure Scenario, 19/07/2019

Substance identity	
Chemical name	ETHYLENE GLYCOL
CAS No.	107-21-1
EINECS No.	203-473-3

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

1.1 TITLE SECTION

Exposure Scenario name	Use in cleaning agents
Date - Version	18/07/2019 - 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	PROC8b
CS7 Industrial	PROC7
CS8 Industrial	PROC8a
CS9 Industrial	PROC10
CS10 Industrial	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)
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Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

0.123 hPa

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

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

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

Frequency:

Use frequency 240 days per year

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

Personal protection

Wear suitable gloves tested to EN374.

Other conditions affecting worker exposure

Indoor use

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

Process Categories

Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Product (article) characteristics

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

Frequency:

Use frequency 240 days per year

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

Personal protection

Wear suitable gloves tested to EN374.

Other conditions affecting worker exposure

Indoor use

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

Process Categories

Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

Product (article) characteristics

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

Frequency:

Use frequency 240 days per year

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

Personal protection

Wear suitable gloves tested to EN374.

Other conditions affecting worker exposure

Indoor use

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

Process Categories

Chemical production where opportunity for exposure arises (PROC4)

Product (article) characteristics

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

Frequency:

Use frequency 240 days per year

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

Personal protection

Wear suitable gloves tested to EN374.

Other conditions affecting worker exposure

Indoor use

1.2. CS6: Worker Contributing Scenario: Industrial (PROC8b)**Process Categories**

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

Product (article) characteristics**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

Frequency:

Use frequency 240 days per year

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

Wear suitable gloves tested to EN374.

Other conditions affecting worker exposure

Indoor use

1.2. CS7: Worker Contributing Scenario: Industrial (PROC7)**Process Categories**

Industrial spraying (PROC7)

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

Covers percentage substance in the product up to 100 %.

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

Amount per use 1 L/min

Duration:

Covers daily exposures up to 8 hours

Frequency:

Use frequency 5 days per week

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

Wear suitable gloves tested to EN374.

Dermal - minimum efficiency of: 90 %

Other conditions affecting worker exposure

Indoor use

Room size: Covers use in room size of > 1000 m³**1.2. CS8: Worker Contributing Scenario: Industrial (PROC8a)****Process Categories**

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

Product (article) characteristics**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

Frequency:

Use frequency 240 days per year

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

Personal protection

Wear suitable gloves tested to EN374.

Other conditions affecting worker exposure

Indoor use

Ventilation rate: > 90 %

1.2. CS9: Worker Contributing Scenario: Industrial (PROC10)

Process Categories

Roller application or brushing (PROC10)

Product (article) characteristics

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

Frequency:

Use frequency 240 days per year

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

Personal protection

Wear suitable gloves tested to EN374.

Use suitable eye protection.

Other conditions affecting worker exposure

Indoor use

1.2. CS10: Worker Contributing Scenario: Industrial (PROC13)

Process Categories

Treatment of articles by dipping and pouring (PROC13)

Product (article) characteristics

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

Frequency:

Use frequency 240 days per year

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

Personal protection

Wear suitable gloves tested to EN374.

Use suitable eye protection.

Other conditions affecting worker exposure

Indoor use

1.3 Exposure estimation and reference to its source

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.001
inhalative, local, long-term	N/A	EASY TRA v2.0	0.001
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.003
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.004

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.07
inhalative, local, long-term	N/A	EASY TRA v2.0	0.07
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.01
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.08

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.22
inhalative, local, long-term	N/A	EASY TRA v2.0	0.22
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.003
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.223

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.37
inhalative, local, long-term	N/A	EASY TRA v2.0	0.37
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.06
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.43

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.37

inhalative, local, long-term	N/A	EASY TRA v2.0	0.37
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.06
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.43

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.28
inhalative, local, long-term	N/A	EASY TRA v2.0	0.28
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.52
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.8

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.37
inhalative, local, long-term	N/A	EASY TRA v2.0	0.37
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.06
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.43

1.3. CS9: Worker Contributing Scenario: Industrial (PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.74
inhalative, local, long-term	N/A	EASY TRA v2.0	0.74
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.03
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.77

1.3. CS10: Worker Contributing Scenario: Industrial (PROC13)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.74
inhalative, local, long-term	N/A	EASY TRA v2.0	0.74
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.01

combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.75
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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	19/07/2019 - 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	PROC8b
CS7 General use from professional operators	PROC8a
CS8 General use from professional operators	PROC10
CS9 General use from professional operators	PROC11
CS10 General use from professional operators	PROC13

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

Vapour pressure:

0.123 hPa

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

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

Duration:

Covers daily exposures up to 8 hours

Frequency:

Use frequency 240 days per year

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

Wear suitable gloves tested to EN374.

Use suitable eye protection.

Other conditions affecting worker exposure

Indoor use

2.2. CS3: Worker Contributing Scenario: General use from professional operators (PROC2)**Process Categories**

Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

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

Liquid

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

Frequency:

Use frequency 240 days per year

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

Wear suitable gloves tested to EN374.

Use suitable eye protection.

Other conditions affecting worker exposure

Indoor use

2.2. CS4: Worker Contributing Scenario: General use from professional operators (PROC3)**Process Categories**

Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

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

Liquid

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

Frequency:

Use frequency 240 days per year

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

Wear suitable gloves tested to EN374.

Use suitable eye protection.

Other conditions affecting worker exposure

Indoor use

2.2. CS5: Worker Contributing Scenario: General use from professional operators (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 100 %.

Amount used, frequency and duration of use/exposure

Duration:

Covers daily exposures up to 8 hours

Frequency:

Use frequency 240 days per year

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

Personal protection

Wear suitable gloves tested to EN374.

Use suitable eye protection.

Other conditions affecting worker exposure

Indoor use

2.2. 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

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

Frequency:

Use frequency 240 days per year

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

Personal protection

Wear suitable gloves tested to EN374.

Use suitable eye protection.

Other conditions affecting worker exposure

Indoor use

2.2. CS7: 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

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

Frequency:

Use frequency 240 days per year

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

Wear suitable gloves tested to EN374.

Use suitable eye protection.

Other conditions affecting worker exposure

Indoor use

Ventilation rate: 80 %**2.2. CS8: 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 100 %.

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

Covers daily exposures up to 8 hours

Frequency:

Use frequency 240 days per year

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

Wear suitable gloves tested to EN374.

Use suitable eye protection.

Wear suitable respiratory protection.

Inhalation - minimum efficiency of: 80 %

Other conditions affecting worker exposure

Indoor use

Ventilation rate: 80 %**2.2. CS9: Worker Contributing Scenario: General use from professional operators (PROC11)****Process Categories**

Non industrial spraying (PROC11)

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

Liquid

Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

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

Amount per use 0.05 L/min

Duration:

Exposure duration 180 min

Frequency:

Use frequency < 5 days per week

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

Wear suitable gloves tested to EN374. Use suitable eye protection.	Inhalation - minimum efficiency of: 90 %
Wear suitable respiratory protection.	Inhalation - minimum efficiency of: 80 %

Other conditions affecting worker exposure

Indoor use

Room size: Covers use in room size of > 100 m³

Ventilation rate: 80 %

2.2. CS10: 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

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

Frequency:

Use frequency < 240 days per year

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

Personal protection

Wear suitable gloves tested to EN374. Use suitable eye protection.	Inhalation - minimum efficiency of: 90 %
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Other conditions affecting worker exposure

Indoor use

2.3 Exposure estimation and reference to its source

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.001
dermal, local, long-term	N/A	ECETOC TRA worker v2.0	0.001
inhalative, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.003

dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.004
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2.3. CS3: Worker Contributing Scenario: General use from professional operators (PROC2)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.37
dermal, local, long-term	N/A	ECETOC TRA worker v2.0	0.37
inhalative, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.01
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.38

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.22
dermal, local, long-term	N/A	ECETOC TRA worker v2.0	0.22
inhalative, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.003
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.223

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.74
dermal, local, long-term	N/A	ECETOC TRA worker v2.0	0.74
inhalative, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.006
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.8

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.74
dermal, local, long-term	N/A	ECETOC TRA worker v2.0	0.74
inhalative, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.06
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.8

2.3. CS7: 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	N/A	ECETOC TRA worker v2.0	0.37
dermal, local, long-term	N/A	ECETOC TRA worker v2.0	0.37
inhalative, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.13
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.5

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.37
dermal, local, long-term	N/A	ECETOC TRA worker v2.0	0.37
inhalative, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.3
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.4

2.3. CS9: Worker Contributing Scenario: General use from professional operators (PROC11)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.4
dermal, local, long-term	N/A	ECETOC TRA worker v2.0	0.4
inhalative, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.51
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.91

2.3. CS10: Worker Contributing Scenario: General use from professional operators (PROC13)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.74
dermal, local, long-term	N/A	ECETOC TRA worker v2.0	0.74
inhalative, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.01
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.75

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	Use in antifreeze products
Date - Version	19/07/2019 - 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	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	PROC8a
CS5 General use from professional operators	PROC8b
CS6 General use from professional operators	PROC11

3.2 Conditions of use affecting exposure

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

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

Physical form of product:

Liquid

Vapour pressure:

0.123 hPa

3.2. 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

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

Frequency:

Covers exposure up to 240 days per year

Technical and organisational conditions and measures

Technical and organisational measures

Use in contained systems

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

Personal protection

Wear suitable gloves tested to EN374.

Other conditions affecting worker exposure

Indoor use

3.2. 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

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

Frequency:

Covers exposure up to 240 days per year

Technical and organisational conditions and measures

Technical and organisational measures

Use in contained systems

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

Personal protection

Wear suitable gloves tested to EN374.

Other conditions affecting worker exposure

Indoor use

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 100 %.

Amount used, frequency and duration of use/exposure

Duration:

Covers daily exposures up to 8 hours

Frequency:

Covers exposure up to 240 days per year

Technical and organisational conditions and measures

Technical and organisational measures

Use in contained systems

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

Personal protection

Wear suitable gloves tested to EN374.

Wear suitable respiratory protection.

Inhalation - minimum efficiency of: 80 %

Other conditions affecting worker exposure

Indoor use

Ventilation rate: 80 %

3.2. CS5: 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

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

Frequency:

Covers exposure up to 240 days per year

Technical and organisational conditions and measures

Technical and organisational measures

Use in contained systems

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

Personal protection

Wear suitable gloves tested to EN374.

Other conditions affecting worker exposure

Indoor use

3.2. CS6: Worker Contributing Scenario: General use from professional operators (PROC11)

Process Categories

Non industrial spraying (PROC11)

Product (article) characteristics

Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

Amount used, frequency and duration of use/exposure

Duration:

Exposure duration 180 min

Frequency:

Covers exposure up to 5 days per week

Technical and organisational conditions and measures

Technical and organisational measures

Use in contained systems

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

Personal protection

Wear suitable gloves tested to EN374.

Dermal - minimum efficiency of: 90 %

Other conditions affecting worker exposure

Indoor use

Room size: Covers use in room size of > 100 m³

3.3 Exposure estimation and reference to its source

3.3. 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	N/A	EASY TRA v2.0	0.001
inhalative, local, long-term	N/A	EASY TRA v2.0	0.001
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.003

combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.004
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3.3. 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	N/A	EASY TRA v2.0	0.37
inhalative, local, long-term	N/A	EASY TRA v2.0	0.37
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.01
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.38

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)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.37
inhalative, local, long-term	N/A	EASY TRA v2.0	0.37
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.13
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.5

3.3. CS5: 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	N/A	EASY TRA v2.0	0.74
inhalative, local, long-term	N/A	EASY TRA v2.0	0.74
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.06
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.8

3.3. CS6: 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	N/A	EASY TRA v2.0	0.4
inhalative, local, long-term	N/A	EASY TRA v2.0	0.4
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.51
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.91

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; Various products (PC9a, PC1, PC4, PC8, PC15)

4.1 TITLE SECTION

Exposure Scenario name	Consumer goods
Date - Version	19/07/2019 - 1.0
Life Cycle Stage	Consumer use
Main user group	Consumer uses
Product Categories	Coatings and paints, thinners, paint removers (PC9a) - Adhesives, sealants (PC1) - Anti-freeze and de-icing products (PC4) - Biocidal products (PC8) - Non-metal surface treatment products (PC15) - Heat transfer fluids (PC16) - Hydraulic fluids (PC17) - Ink and toners (PC18) - Leather treatment products (PC23) - Polishes and wax blends (PC31) - Polymer preparations and compounds (PC32) - Textile dyes and impregnating products (PC34) - Washing and cleaning products (PC35)

Environment Contributing Scenario

CS1 Covered by	ERC8a - ERC8c - ERC8d - ERC8f - ERC9a - ERC9b
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Consumer Contributing Scenario

CS2 Consumer	PC1
CS3 Consumer	PC4 - PC16 - PC17 - PC4_1
CS4 Consumer	PC4 - PC4_2
CS5 Consumer	PC9a - PC15 - PC9a_2, PC15_2
CS6 Consumer	PC8
CS7 Consumer	PC18
CS8 Consumer	PC31
CS9 Consumer	PC32
CS10 Consumer	PC35 - PC8_2, PC35_2
CS11 Consumer	PC35 - PC8_3, PC35_3
CS12 Consumer	PC15 - PC23 - PC34 - PC9a_1, PC15_1

4.2 Conditions of use affecting exposure

4.2. CS1: Environment Contributing Scenario: Covered by (ERC8a, ERC8c, ERC8d, ERC8f, ERC9a, ERC9b)

Environmental release categories	Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) - Widespread use leading to inclusion into/onto article (indoor) - Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) - Widespread use leading to inclusion into/onto article (outdoor) - Widespread use of functional fluid (indoor) - Widespread use of functional fluid (outdoor) (ERC8a, ERC8c, ERC8d, ERC8f, ERC9a, ERC9b)
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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 %.

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

Product Categories	Adhesives, sealants (PC1)
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<i>Product (article) characteristics</i>	
Concentration of substance in product: Covers concentrations up to 0.75 %	
4.2. CS3: Consumer Contributing Scenario: Consumer (PC4, PC16, PC17)	
Product Categories	Anti-freeze and de-icing products - Heat transfer fluids - Hydraulic fluids (PC4, PC16, PC17)
Product (Sub-)Categories	Washing car window (PC4_1)
<i>Product (article) characteristics</i>	
Concentration of substance in product: Covers concentrations up to 45 %	
<i>Amount used, frequency and duration of use/exposure</i>	
Duration: Exposure duration < 15 min	
4.2. CS4: Consumer Contributing Scenario: Consumer (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 percentage substance in the product up to 100 %.	
4.2. CS5: Consumer Contributing Scenario: Consumer (PC9a, PC15)	
Product Categories	Coatings and paints, thinners, paint removers - Non-metal surface treatment products (PC9a, PC15)
Product (Sub-)Categories	Solvent rich, high solid, water borne paint (PC9a_2, PC15_2)
<i>Product (article) characteristics</i>	
Concentration of substance in product: Covers concentrations up to 10 %	
4.2. CS6: Consumer Contributing Scenario: Consumer (PC8)	
Product Categories	Biocidal products (PC8)
4.2. CS7: Consumer Contributing Scenario: Consumer (PC18)	
Product Categories	Ink and toners (PC18)
<i>Product (article) characteristics</i>	
Concentration of substance in product: Covers percentage substance in the product up to 5 %.	
4.2. CS8: Consumer Contributing Scenario: Consumer (PC31)	
Product Categories	Polishes and wax blends (PC31)
<i>Product (article) characteristics</i>	
Concentration of substance in product: Covers concentrations up to 10 %	
4.2. CS9: Consumer Contributing Scenario: Consumer (PC32)	
Product Categories	Polymer preparations and compounds (PC32)
<i>Product (article) characteristics</i>	
Concentration of substance in product: Covers percentage substance in the product up to 5 %.	
4.2. CS10: Consumer Contributing Scenario: Consumer (PC35)	

Product Categories	Washing and cleaning products (PC35)
Product (Sub-)Categories	Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) (PC8_2, PC35_2)

Product (article) characteristics

Concentration of substance in product:

Covers concentrations up to 20 %

4.2. CS11: Consumer Contributing Scenario: Consumer (PC35)

Product Categories	Washing and cleaning products (PC35)
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 percentage substance in the product up to 5 %.

4.2. CS12: Consumer Contributing Scenario: Consumer (PC15, PC23, PC34)

Product Categories	Non-metal surface treatment products - Leather treatment products - Textile dyes and impregnating products (PC15, PC23, PC34)
Product (Sub-)Categories	Waterborne latex wall paint (PC9a_1, PC15_1)

4.3 Exposure estimation and reference to its source

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	N/A	0.59
dermal, systemic, long-term	N/A	N/A	0.005
combined routes, systemic, long-term	N/A	N/A	0.505

4.2. CS3: Consumer Contributing Scenario: Consumer (PC4, PC16, PC17)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	N/A	0.28
dermal, systemic, long-term	N/A	N/A	0.08
combined routes, systemic, long-term	N/A	N/A	0.36

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	N/A	0
dermal, systemic, long-term	N/A	N/A	0.09
combined routes, systemic, long-term	N/A	N/A	0.09

4.2. CS5: Consumer Contributing Scenario: Consumer (PC9a, PC15)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	N/A	0.04
dermal, systemic, long-term	N/A	N/A	0.02
combined routes, systemic, long-term	N/A	N/A	0.06

4.2. CS6: Consumer Contributing Scenario: Consumer (PC8)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	N/A	0
dermal, systemic, long-term	N/A	N/A	0.006
combined routes, systemic, long-term	N/A	N/A	0.006

4.2. CS7: Consumer Contributing Scenario: Consumer (PC18)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	N/A	0.18
dermal, systemic, long-term	N/A	N/A	0
combined routes, systemic, long-term	N/A	N/A	0.18

4.2. CS8: Consumer Contributing Scenario: Consumer (PC31)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	N/A	0.56
dermal, systemic, long-term	N/A	N/A	0.04
combined routes, systemic, long-term	N/A	N/A	0.6

4.2. CS9: Consumer Contributing Scenario: Consumer (PC32)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	N/A	0.009
dermal, systemic, long-term	N/A	N/A	0.001
combined routes, systemic, long-term	N/A	N/A	0.01

4.2. CS10: Consumer Contributing Scenario: Consumer (PC35)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	N/A	0.09
dermal, systemic, long-term	N/A	N/A	0.22
combined routes, systemic, long-term	N/A	N/A	0.31

4.2. CS11: Consumer Contributing Scenario: Consumer (PC35)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	N/A	0.02
dermal, systemic, long-term	N/A	N/A	0.002
combined routes, systemic, long-term	N/A	N/A	0.022

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.