

**Ficha de datos de seguridad****DESIDERI PROTETTIVO**

Ficha de datos de seguridad del 04/09/2023 Revisión 3

Esta Ficha de Datos de Seguridad está elaborada de forma voluntaria: no es obligatoria de acuerdo con el Artículo 31 del Reglamento (CE) N° 1907/2006.

**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: DESIDERI PROTETTIVO

Código comercial: COL799

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

Uso recomendado: Protector transparente para productos decorativos

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

Proveedor: FASSA Srl

Via Lazzaris, 3 - 31027 Spresiano (TV) - ITALY

Tel. +39 0422 7222

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Responsable: laboratorio.spresiano@fassabortolo.it

**1.4. Teléfono de emergencia**

+34 91 562 04 20

**SECCIÓN 2. Identificación de los peligros****2.1. Clasificación de la sustancia o de la mezcla****Reglamento (CE) n. 1272/2008 (CLP)**

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).

**Disposiciones especiales:**

EUH208 Contiene 1,2-Bencisotiazol-3(2H)-ona. Puede provocar una reacción alérgica.

EUH208 Contiene Masa de reacción de 5-cloro-2-metil-2H-isotiazol-3-ona y 2-metil-2H-isotiazol-3-ona (3:1).  
Puede provocar una reacción alérgica.**Disposiciones especiales de acuerdo con el anexo XVII del Reglamento REACH y sus posteriores modificaciones:**

Ninguno

**2.3. Otros peligros**Ninguna sustancia PBT, mPmB o perturbador endocrino presente en concentración  $\geq 0.1\%$ 

Ningún otro riesgo

**SECCIÓN 3. Composición/información sobre los componentes****3.1. Sustancias**

N.A.

**3.2. Mezclas**

Identificación del preparado: DESIDERI PROTETTIVO

**Componentes peligrosos según el Reglamento CLP y su correspondiente clasificación:**

Cantidad	Nombre	Núm. Ident.	Clasificación	Número de registro:
$\geq 1 - < 3 \%$	2-Butoxietanol	CAS:111-76-2 EC:203-905-0 Index:603-014-00-0	Acute Tox. 3, H331 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319  Estimación de la toxicidad aguda: ETA - Oral: 1200mg/kg pc ETA - Inhalación (Vapores): 3mg/l	01-2119475108-36-xxxx

≥0.005 - 1,2-Bencisotiazol-3(2H)-ona CAS:2634-33-5 Acute Tox. 2, H330 Acute Tox. 4,  
<0.025 % EC:220-120-9 H302 Skin Irrit. 2, H315 Eye Dam.  
Index:613-088-1, H318 Skin Sens. 1, H317  
00-6 Aquatic Acute 1, H400 Aquatic  
Chronic 1, H410, M:1

Límites de concentración  
específicos:  
0.05% ≤ C < 100%: Skin Sens. 1  
H317

Estimación de la toxicidad aguda:  
ETA - Oral: 500mg/kg pc  
ETA - Inhalación (Polvo o niebla):  
0.05mg/l

≥0.00015 - Masa de reacción de 5-cloro-2- CAS:55965-84-9 Acute Tox. 2, H330 Acute Tox. 2,  
<0.0015 % metil-2H-isotiazol-3-ona y 2-metil- Index:613-167- H310 Acute Tox. 3, H301 Skin  
2H-isotiazol-3-ona (3:1) 00-5 Corr. 1C, H314 Eye Dam. 1, H318  
Skin Sens. 1A, H317 Aquatic Acute  
1, H400 Aquatic Chronic 1, H410,  
M-Chronic:100, M-Acute:100,  
EUH071

Límites de concentración  
específicos:  
0.6% ≤ C < 100%: Skin Corr. 1C  
H314  
0.06% ≤ C < 0.6%: Skin Irrit. 2  
H315  
0.6% ≤ C < 100%: Eye Dam. 1  
H318  
0.06% ≤ C < 0.6%: Eye Irrit. 2  
H319  
0.0015% ≤ C < 100%: Skin Sens.  
1A H317

Estimación de la toxicidad aguda:  
ETA - Oral: 100mg/kg pc  
ETA - Cutánea: 50mg/kg pc  
ETA - Inhalación (Polvo o niebla):  
0.05mg/l

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## 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:

No inducir el vómito, consultar con un médico presentando la FDS (Ficha de Datos de Seguridad) y la etiqueta de productos peligrosos

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 conocido.

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

Consultar a un médico en caso de malestar.

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## SECCIÓN 5. Medidas de lucha contra incendios

### 5.1. Medios de extinción

Medios de extinción apropiados:

El producto no es inflamable.

Medios de extinción que no se deben utilizar por motivos de seguridad:

Ninguno en particular.

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

La combustión produce humo pesado.

En caso de incendio y/o explosión, no respirar los humos.

### 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.

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## 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.

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

### 6.3. Métodos y material de contención y de limpieza

Material idóneo para la recogida: material absorbente inerte (por ejemplo, arena, vermiculita).

Después de recoger el producto, lave con agua la zona y los materiales implicados.

Conservar el agua de lavado contaminada y eliminarla.

### 6.4. Referencia a otras secciones

Véanse también los apartados 8 y 13.

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## SECCIÓN 7. Manipulación y almacenamiento

### 7.1. Precauciones para una manipulación segura

Evitar el contacto con la piel y ojos, la inhalación de vapores y nieblas.

Recomendaciones sobre medidas generales de higiene en el trabajo:

No comer ni beber durante el trabajo.

Remitirse también al apartado 8 para los dispositivos de protección recomendados.

### 7.2. Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades

Conservar los recipientes bien cerrados en un lugar fresco y ventilado, lejos de fuentes de calor.

Mantener alejado de comidas, bebidas y piensos.

Materias incompatibles:

Ver punto 10.5

Indicaciones para los locales:

Locales adecuadamente aireados.

Proteger de las heladas.

### 7.3. Usos específicos finales

Recomendaciones

Ver punto 1.2

Soluciones específicas para el sector industrial

Ningún uso particular

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## SECCIÓN 8. Controles de exposición/protección individual

### 8.1. Parámetros de control

#### Lista de los componentes en la fórmula con un valor OEL.

	Tipo OEL	país	Largo plazo mg/m <sup>3</sup>	Largo Plazo ppm	Corto plazo mg/m <sup>3</sup>	Corto plazo ppm	Nota
2-Butoxietanol CAS: 111-76-2	ACGIH			20.000			A3, BEI - Eye and URT irr
	UE		98.000	20.000	246	50	Skin
	MAK	AUSTRIA	98.000	20.000	200.000	40.000	
	VLEP	BELGIUM	98	20	246	50	
	VLEP	FRANCE	49.000	10.000	246.000	50.000	
	AGW	GERMANY	49.000	10.000	98.000	20.000	Skin
	MAK	GERMANY	49.000	10.000	98.000	20.000	Skin
	ÁK	HUNGARY	98.000		246		
	VLEP	ITALY	98	20	246.000	50	Skin
	NDS	POLAND	98.000		200.000		
	VLEP	ROMANIA	98.000	20.000	246.000	50.000	

VLA	SPAIN	98.000	20.000	245.000	50.000	Skin
SUVA	SWITZERLAN D	49.000	10.000	98.000	20.000	
MAC	NETHERLAND S	100.000		246.000		
WEL	U.K.	123.000	25.000	246.000	50.000	
VLE	PORTUGAL	98.000	20.000	246.000	50.000	Skin
GVI	CROATIA	98.000	20.000	246.000	50.000	Skin
MV	SLOVENIA	98.000	20.000	246.000	50.000	Skin
TLV	CZECHIA	100.000	20.400	200.000	40.800	Skin
Masa de reacción de 5- cloro-2-metil-2H- isotiazol-3-ona y 2-metil- 2H-isotiazol-3-ona (3:1) CAS: 55965-84-9	MAK	AUSTRIA	0.050			
	MAK	GERMANY	0.200	0.400		Inhalable fraction
	SUVA	SWITZERLAN D	0.200	0.400		Inhalable fraction

#### Lista de los componentes contenidos en la fórmula con valor PNEC (nivel ningún efecto previsto)

	Límite PNEC	Vía de exposición	Frecuencia de exposición	Notas
2-Butoxietanol CAS: 111-76-2	8.8 mg/l	agua dulce		
	0.88 mg/l	Agua marina		
	463 mg/l	Microorganismos en aguas residuales (STP)		
	34.6 mg/kg	Sedimentos de agua dulce		
	3.46 mg/kg	Sedimentos de agua marina		
	2.33 mg/kg	Suelo (agricultura)		
	20 mg/kg	Cadena alimentaria		

#### Nivel sin efecto derivado. (DNEL)

	Trabajo industrial	Trabajo profesional	Consumidor	Vía de exposición	Frecuencia de exposición	Notas
2-Butoxietanol CAS: 111-76-2	98 mg/m3	59 mg/m3		Por inhalación humana	A largo plazo, efectos sistémicos	
	1091 mg/m3	426 mg/m3		Por inhalación humana	A corto plazo, efectos sistémicos	
	246 mg/m3	147 mg/m3		Por inhalación humana	A corto plazo, efectos locales	
		6.3 mg/kg		Oral humana	A largo plazo, efectos sistémicos	
		26.7 mg/kg		Oral humana	A corto plazo, efectos sistémicos	

#### 8.2. Controles de la exposición

Procurar una ventilación adecuada. Cuando sea razonablemente factible, esto se puede lograr mediante el uso de ventilación de aire de cambio y una buena aspiración general.

Protección de los ojos:

Gafas con protección lateral (EN 166).

Protección de la piel:

Utilizar ropa adecuada para la protección completa de la piel según la actividad y la exposición (EN 14605/EN 13982), por ej. mono de trabajo, delantal, calzado de seguridad, ropa adecuada.

Protección de las manos:

No existe un material o una combinación de materiales para guantes que pueda garantizar una resistencia ilimitada a cualquier producto químico o combinación de productos.

Para la manipulación prolongada o repetida, usar guantes resistentes a los productos químicos.

Materiales adecuados para guantes de protección (EN 374/EN 16523); NBR (Caucho nitrilo): espesor  $\geq 0.4$  mm; tiempo de permeación  $\geq 480$  min.; Caucho butilo: espesor  $\geq 0.4$  mm; tiempo de permeación  $\geq 480$  min.

La elección de los guantes adecuados no solo depende del material sino también de otras características de calidad que varían de un fabricante a otro, y de los métodos y tiempos de uso de la mezcla.

Protección respiratoria:

Si los trabajadores están expuestos a concentraciones superiores a los límites de exposición, deben utilizar respiradores certificados y adecuados.

Dispositivo de filtrado combinado (EN 14387).

Controles de la exposición ambiental:

Ver punto 6.2

Medidas higiénicas y técnicas

Ver apartado 7.

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## SECCIÓN 9. Propiedades físicas y químicas

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

Aspecto: viscoso

Color: amarillo

Olor: característico

Punto de fusión/congelamiento: N.D.

Punto de ebullición inicial e intervalo de ebullición: N.D.

Inflamabilidad: N.A.

Límite superior/inferior de inflamabilidad o explosión: N.D.

Punto de inflamación:  $> 93^{\circ}\text{C}$

Temperatura de auto-inflamación: N.D.

Temperatura de descomposición: N.D.

pH:  $\geq 7.00 \leq 8.00$  ( Método interno )

Viscosidad cinemática: N.A.

Densidad: 1.03 kg/l ( Método interno )

Densidad de los vapores: N.A.

Presión de vapor: N.D.

Hidrosolubilidad: miscible en todas las relaciones

Solubilidad en aceite: Ningún dato disponible

Coefficiente de reparto (n-octanol/agua): N.A.

#### Características de las partículas:

Tamaño de las partículas: N.A.

### 9.2. Otros datos

Conductividad: N.D.

Propiedades explosivas: N.A. ( Evaluación interna )

Propiedades comburentes: N.A. ( Evaluación interna )

Tasa de evaporación: N.A.

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## 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

Ninguna.

### 10.4. Condiciones que deben evitarse

Evitar acercarse a fuentes de calor.

### 10.5. Materiales incompatibles

Ninguno en particular.

### 10.6. Productos de descomposición peligrosos

En caso de almacenamiento y manipulación adecuados no se desarrollan productos de descomposición peligrosos.

**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:**

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:**

2-Butoxietanol	a) toxicidad aguda	ETA - Oral : 1200 mg/kg pc ETA - Inhalación (Vapores) : 3 mg/l LD50 Piel Conejillo de indias > 2000 mg/kg LC50 Vapor de inhalación Rata > 4.26 mg/l 4h
1,2-Bencisotiazol-3(2H)-ona	a) toxicidad aguda	ETA - Oral : 500 mg/kg pc ETA - Inhalación (Polvo o niebla) : 0.05 mg/l
Masa de reacción de 5-cloro-2-metil-2H-isotiazol-3-ona y 2-metil-2H-isotiazol-3-ona (3:1)	a) toxicidad aguda	ETA - Oral : 100 mg/kg pc ETA - Cutánea : 50 mg/kg pc ETA - Inhalación (Polvo o niebla) : 0.05 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**

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

## 12.1. Toxicidad

Información Ecotoxicológica:

### Lista de propiedades eco-toxicológicas del producto

No clasificado para riesgos medio ambientales

No hay datos disponibles para el producto

### Lista de componentes con propiedades ecotoxicológicas

Componente	Núm. Ident.	Inform Ecotox
2-Butoxietanol	CAS: 111-76-2 - EINECS: 203- 905-0 - INDEX: 603-014-00-0	a) Toxicidad acuática aguda : LC50 Peces 1474 mg/l 96h  a) Toxicidad acuática aguda : EC50 Daphnia 1550 mg/l 48h a) Toxicidad acuática aguda : EC50 Algas 1840 mg/l 72h b) Toxicidad acuática crónica : NOEC Peces > 100 mg/l 21d b) Toxicidad acuática crónica : NOEC Daphnia 100 mg/l 21d
1,2-Bencisotiazol-3(2H)-ona	CAS: 2634-33-5 - EINECS: 220- 120-9 - INDEX: 613-088-00-6	a) Toxicidad acuática aguda : LC50 Peces 11 mg/l 96h  a) Toxicidad acuática aguda : EC50 Daphnia 16.4 mg/l 48h a) Toxicidad acuática aguda : EC50 Algas 0.6 mg/l 72h b) Toxicidad acuática crónica : NOEC Peces 1.05 mg/l - 28d b) Toxicidad acuática crónica : NOEC Daphnia 6 mg/l - 21d b) Toxicidad acuática crónica : NOEC Algas 0.2 mg/l 72h
Masa de reacción de 5-cloro-2- metil-2H-isotiazol-3-ona y 2-metil- 2H-isotiazol-3-ona (3:1)	CAS: 55965-84- 9 - INDEX: 613- 167-00-5	a) Toxicidad acuática aguda : LC50 Peces 0.22 mg/l 96h  a) Toxicidad acuática aguda : EC50 Daphnia 0.1 mg/l 48h a) Toxicidad acuática aguda : EC50 Algas 0.0052 mg/l 48h a) Toxicidad acuática aguda : EC50 Algas de agua dulce 0.048 mg/l 72h b) Toxicidad acuática crónica : NOEC Peces 0.098 mg/l - 28d b) Toxicidad acuática crónica : NOEC Daphnia 0.004 mg/l - 21d b) Toxicidad acuática crónica : NOEC Algas 0.00064 mg/l 48h b) Toxicidad acuática crónica : NOEC Algas de agua dulce 0.0012 mg/l 72h

## 12.2. Persistencia y degradabilidad

Componente	Persistencia/degradabilidad:
2-Butoxietanol	Rápidamente degradable
1,2-Bencisotiazol-3(2H)-ona	No rápidamente degradable
Masa de reacción de 5-cloro-2- metil-2H-isotiazol-3-ona y 2-metil- 2H-isotiazol-3-ona (3:1)	No rápidamente degradable

## 12.3. Potencial de bioacumulación

N.A.

## 12.4. Movilidad en el suelo

N.A.

## 12.5. Resultados de la valoración PBT y mPmB

Sobre la base de los datos disponibles, el producto no contiene sustancias PBT/mPmB en porcentaje  $\geq$  0.1%.

## 12.6. Propiedades de alteración endocrina

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

## 12.7. Otros efectos adversos

N.A.

## 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.

No permitir la entrada en alcantarillados o cursos de agua.

Deseche los recipientes contaminados por el producto de acuerdo con las disposiciones legales locales o nacionales.

El producto, una vez caducado, debe desecharse según la normativa vigente.

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## SECCIÓN 14. Información relativa al transporte

Producto no peligroso según los criterios de la reglamentación del transporte.

### 14.1. Número ONU o número ID

N/A

### 14.2. Designación oficial de transporte de las Naciones Unidas

ADR-Designación del transporte: N/A

IATA-Nombre técnico: N/A

IMDG-Nombre técnico: N/A

### 14.3. Clase(s) de peligro para el transporte

ADR-Por carretera: N/A

IATA-Clase: N/A

IMDG-Clase: N/A

### 14.4. Grupo de embalaje

ADR-Grupo de embalaje: N/A

IATA-Grupo de embalaje: N/A

IMDG-Grupo de embalaje: N/A

### 14.5. Peligros para el medio ambiente

Agente contaminante del mar: No

Contaminante ambiental: No

IMDG-EMS: N/A

### 14.6. Precauciones particulares para los usuarios

Carretera y Ferrocarril (ADR-RID)

ADR-Etiquetado: N/A

ADR - Número de identificación del peligro: N/A

ADR-Disposiciones especiales: N/A

ADR-Categoría de transporte (Código de restricción en túneles):

Aire (IATA)

IATA-Pasajeros del avión: N/A

IATA-Carga del avión: N/A

IATA-Etiquetado: N/A

IATA-Peligro secundario: N/A

IATA-Erg: N/A

IATA-Disposiciones especiales: N/A

Mar (IMDG)

IMDG-Código de estiba: N/A

IMDG-Nota de estiba: N/A

IMDG-Peligro secundario: N/A

IMDG-Disposiciones especiales: N/A

### 14.7. Transporte marítimo a granel con arreglo a los instrumentos de la OMI

N.A.

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## 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)

Directiva 2010/75/EU

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: 3

Restricciones relacionadas con las sustancias contenidas: 30 (CAS 13463-41-7), 55, 75

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

Ninguna

**Reglamento (UE) No 649/2012 (Reglamento PIC)**

No hay sustancias listadas

**Clase de peligro para las aguas (Alemania).**

Clase 1: escasamente peligroso para el agua.

**Sustancias SVHC:**

Sobre la base de los datos disponibles, el producto no contiene sustancias SVHC en porcentaje  $\geq 0.1\%$ .

**Valor límite UE para el contenido de COV (Directiva 2004/42/CE)** Cat. A/I, BA: COV máx. 200 g/l (enero 2010); COV producto < 200 g/l

**15.2. Evaluación de la seguridad química**

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

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**SECCIÓN 16. Otra información**

Código	Descripción
H302	Nocivo en caso de ingestión.
H315	Provoca irritación cutánea.
H319	Provoca irritación ocular grave.
H331	Tóxico en caso de inhalación.

Código	Clase y categoría de peligro	Descripción
3.1/3/Inhal	Acute Tox. 3	Toxicidad aguda (por inhalación), Categoría 3
3.1/4/Oral	Acute Tox. 4	Toxicidad aguda (oral), Categoría 4
3.2/2	Skin Irrit. 2	Irritación cutánea, Categoría 2
3.3/2	Eye Irrit. 2	Irritación ocular, Categoría 2

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

Fichas de datos de seguridad de los proveedores de materias primas.

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.

Explicación de las abreviaturas y acrónimos usados en la ficha de datos de seguridad:

ACGIH: Conferencia Americana de Higienistas Industriales Gubernamentales

ADR: Acuerdo europeo relativo al transporte internacional de mercancías peligrosas por carretera.

ATE: Estimación de la toxicidad aguda

ATEmix: Estimación de Toxicidad Aguda (Mezclas)

BEI: Índice Biológico de Exposición

CAS: Chemical Abstracts Service (de la American Chemical Society).

CAV: Instituto de toxicología

CE: Comunidad Europea  
CLP: Clasificación, etiquetado, embalaje.  
CMR: Carcinógeno, mutagénico y tóxico para la reproducción  
COV: Compuesto orgánico volátil  
CSA: Valoración de la seguridad química  
CSR: Informe sobre la seguridad química  
DNEL: Nivel sin efecto derivado.  
EC50: Concentración efectiva media  
ECHA: Agencia Europea de Sustancias y Preparados Químicos  
EINECS: Catálogo Europeo de Sustancias Químicas Comercializadas.  
ES: Escenario de exposición  
GefStoffVO: Ordenanza sobre sustancias peligrosas, Alemania.  
GHS: Sistema Globalmente Armonizado de clasificación y etiquetado de productos químicos.  
IARC: Centro Internacional de Investigaciones sobre el Cáncer  
IATA: Asociación de Transporte Aéreo Internacional.  
IC50: Concentración inhibitoria media  
IMDG: Código marítimo internacional de mercancías peligrosas.  
LC50: Concentración letal para el 50% de la población expuesta.  
LD50: Dosis letal para el 50% de la población expuesta.  
LDLo: Dosis letal baja  
N.A.: No aplicable  
N/A: No aplicable  
N/D: No definido/No disponible  
N.D.: No disponible  
NIOSH: Instituto Nacional para la Salud y la Seguridad Ocupacional  
NOAEL: Nivel sin Efecto Adverso Observado  
OSHA: Administración de Seguridad y Salud Ocupacional.  
PBT: Persistente, bioacumulable y tóxico  
PGK: Instrucciones de embalaje  
PNEC: Concentración prevista sin efecto.  
PSG: Pasajeros  
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.  
TLV-TWA: Valor límite del umbral para el tiempo medio ponderado de 8 horas por día (Estándar ACGIH).  
vPvB: Muy persistente y muy bioacumulable.  
WGK: Clase de peligro para las aguas (Alemania).

**Parágrafos modificados respecto la revisión anterior**

- SECCIÓN 1. Identificación de la sustancia o la mezcla y de la sociedad o la empresa
- SECCIÓN 2. Identificación de los peligros
- SECCIÓN 3. Composición/información sobre los componentes
- SECCIÓN 8. Controles de exposición/protección individual
- SECCIÓN 11. Información toxicológica
- SECCIÓN 12. Información ecológica
- SECCIÓN 13. Consideraciones relativas a la eliminación
- SECCIÓN 14. Información relativa al transporte
- SECCIÓN 15. Información reglamentaria
- SECCIÓN 16. Otra información

## 2-Butoxyethanol

### Substance identification

Chemical Name: 2-Butoxyethanol

CAS number: 111-76-2

### EXPOSURE SCENARIO 5: USE IN COATINGS.

Based on the ECHA CSA&IR template, part D of June 2008 combined with the GES narrative file.

#### SECTION 1

**Title:** 2-Butoxyethanol Use in coatings.

Life Cycle Stage (LCS): Use at an industrial site.

**Environmental release categories:** ERC4; ESVOC SpERC 4.3a.v1

Process categories: PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC15.

Processes, tasks and activities including: Covers the use in coatings (paints, inks, adhesives, etc.), including exposures during use (materials receipt, storage, preparation and transfer of bulk and semi-bulk products, application by roller or spreader, dipping, flow, fluidised bed on production lines and film formation), cleaning and maintenance of equipment and associated laboratory activities [GES3\_I].

Evaluation method: Health: ECETOC TRA model used [EE1]. Environment: ECETOC TRA model used [EE1]. SPERC ESVOC used.

#### SECTION 2: OPERATING CONDITIONS AND RISK MANAGEMENT MEASURES.

##### SECTION 2.1: Environmental exposure control:

Product features: The substance has a unique structure [PrC1]. Non-hydrophobic [PrC4b]. Liquid, vapor pressure <0.5 kPa under standard conditions [OC3]. Miscible in water. Virtually non-toxic to aquatic species. Readily biodegradable [PrC5a]. Low bioaccumulation potential.

Amount used per site (tonnes per year): 2600 (8670 kg/g)

Frequency and duration of use: Continuous process [CS54]. 300 days per year of activity.

Environmental factors not influenced by risk management: Local dilution factor in fresh water [EF1]: 10. Local dilution factor in sea water [EF2]: 100.

Other given operational conditions affecting environmental exposure: No specific measures required. Days of issue (days/year) [FD4]: 300. Continuous release [FD2].

Local technical conditions and measures to reduce and limit discharges and air emissions: Treatment of air emissions is not required for REACH compliance but may be required to comply with other environmental legislation. Soil emission controls are not applicable as there is no direct release to soil [TCR4]. To control aerosol emissions into the air use a scrubber or dry filtration system. On-site wastewater treatment required [TCR13]. Treat on-site waste water (prior to receiving water discharge) to provide the required removal efficiency  $\geq$  (%) [TCR8]: 87. Assumed industrial wastewater treatment plant flow (m<sup>3</sup>/d): 2000. If discharging to municipal sewage treatment plant, no on-site wastewater treatment required [TCR9]. Prevent discharge of undissolved substance to or recover from waste water [TCR14].

Organizational measures to prevent/limit release from a site: Construct a containment basin around storage facilities to prevent soil and water pollution in the event of spillage [S5]. Prevent environmental discharge consistent with regulatory requirements [OMS4]. The site shall adopt a spillage plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases [W2]. A leak prevention plan is needed to prevent low level continual releases [W3].

Conditions and measures related to sewage treatment plant: Estimated substance removal from waste water via domestic sewage treatment (%) [STP3]: 87. Assumed domestic sewage treatment plant flow (m<sup>3</sup>/d) [STP5]: 2000.

Conditions and measures for the disposal of articles at end of their service life: Estimated quantity of waste treated - not exceeding: 5%. Type of treatment suitable for waste: incineration. Removal Effectiveness (%): 99,98. Treat as hazardous waste. External treatment and disposal of waste should comply with applicable local and/or national regulations [ETW3]. Dispose of waste or used containers in accordance with local regulations [ENVT12].

Conditions and measures for the recovery of articles at the end of their service life: Not applicable.

Other environmental control measures in addition to those described above: none.

##### SECTION 2.2: Worker exposure control.

###### Product features:

Physical state of the product: Liquid, vapor pressure <0.5 kPa under standard conditions [OC3].

Concentration of the substance in the product: Covers a percentage substance in the product up to 100% (unless otherwise stated) [G13].

Amounts used: Not applicable.

Frequency and duration of use: Covers a daily exposure up to 8 hours (unless otherwise specified) [G2]. Continuous process [CS54].

Human factors not influenced by risk management: none.

Other given operational conditions affecting workers exposure: Assumes a good basic standard of occupational hygiene has been implemented [G1]. Assumes use of the product at not more than 20°C above ambient temperature, unless otherwise specified [G15].

Technical conditions and process-level (source) measures and technical conditions and measures to control dispersion from the source to the worker: none.

###### Contributing scenarios:

General measures (skin irritants) [G19]: Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Immediately remove any contamination with skin. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop [E3]. Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying. [E4].

General measures (eye irritants) [G44]: Use suitable eye protection [PPE26]. Avoid direct eye contact with product, also via contamination on hands [E73]. Avoid splashing [C&H15].

ES5-CS1: PROC1 General exposures (closed systems) [CS15]. Continuous process [CS54]. without sampling [CS57]: No other specific measures identified [EI20].  
 ES5-CS2: PROC2 General exposures (closed systems) [CS15]. Continuous process [CS54]. With sampling [CS56]: No other specific measures identified [EI20].  
 ES5-CS3: PROC2 Film formation - accelerated drying (50-100°C). Drying (>100 °C). UV/EB radiation curing [CS94]: Handle substance within a predominantly closed system provided with extract ventilation [E49].  
 ES5-CS4: PROC3 Mixing operations (closed systems) [CS29]. General exposures (closed systems) [CS15]. No other specific measures identified [EI20].  
 ES5-CS5: PROC4 Film formation - air drying [CS95]. No other specific measures identified [EI20].  
 ES5-CS6: PROC5 Preparation of material for application [CS96]. Mixing operations (open systems) [CS30]. No other specific measures identified [EI20].  
 ES5-CS7: PROC7 Spray application (automatic/robotic) [CS97]. Carry out in a vented booth or extracted enclosure [E57].  
 ES5-CS8: PROC7 Spray application [CS10]. Manual [CS34]: Carry out in a vented booth or extracted enclosure [E57]. or, Wear a respirator conforming to EN140 with a type A filter or better [PPE22]. Change the filter cartridge on the respirator daily [PPE25].  
 ES5-CS9: PROC8a Material transfers [CS3]. (open systems) [CS108]. No other specific measures identified [EI20].  
 ES5-CS10: PROC8b Material transfers [CS3]. (closed systems) [CS107]. No other specific measures identified [EI20].  
 ES5-CS11: PROC10 Roller application, spreader, flow [CS98]. Provide a good standard of general ventilation (not less than 3-5 air changes per hour) [E11].  
 ES5-CS12: PROC13 Dipping and pouring [CS4]. No other specific measures identified [EI20].  
 ES5-CS13: PROC15 Laboratory activity [CS36]. No other specific measures identified [EI20].  
 ES5-CS14: PROC9 Drum/batch transfers [CS8]. Material transfers [CS3]. Transfer/pour from containers [CS22]. No other specific measures identified [EI20].

## SECTION 3: EXPOSURE ESTIMATION:

### *Maximum exposure resulting from the contributing scenarios described.*

#### **Environment:**

##### **ES5-ES1: ERC4**

Conditions given in SPERC fact sheet give rise to following releases fractions [OOC29]. (ESVOC SpERC 4.3a.v1).

Fraction released into air from the process (initial release before application of RMM) [OOC4]: 0.98.

Fraction released into waste water from the process (initial release before application of RMM) [OOC5]: 0.02.

Fraction released into soil by the process (initial release before application of RMM) [OOC6]: 0.

PEC of microorganisms in wastewater treatment plant: 8.66E+01mg/l. Risk characterization report: 1.87E-01.

Local PEC in surface water: 1.10E+00mg/l. Risk characterization report: 1.25E-01.

Local PEC in freshwater sediments: 4.69E+00mg/kgdw. Risk characterization report: 1.36E-01.

Local PEC in seawater during the release episode: 1.10E-01mg/l. Risk characterization report: 1.25E-01.

Local PEC in marine sediments: 4.69E-01mg/kgdw. Risk characterization report: 1.36E-01.

Local PEC in soil: 6.14E-01mg/kgdw. Risk characterization report: 2.64E-01. Risk from environmental exposure is driven by soil [TCR1f].

#### **Health:**

##### **Exposure resulting from contributing scenario ES5-CS1:**

Inhalation (steam). 8 hours on average 0.01ppm. Risk characterization report: <0.001. 15 minutes average 0.04ppm. Risk characterization report: <0.001. Dermal: 0.03 mg/kg/d.

##### **Exposure resulting from contributing scenario ES5-CS2:**

Inhalation (steam). 8 hours on average 1ppm. Risk characterization report: 0.05. 15 minutes average 4ppm. Risk characterization report: 0,08. Dermal: 1.4 mg/kg/d.

##### **Exposure resulting from contributing scenario ES5-CS3:**

Inhalation (steam). 8 hours on average 0.5ppm. Risk characterization report: 0,025. 15 minutes average 2ppm. Risk characterization report: 0,04. Dermal: 1.4 mg/kg/d.

##### **Exposure resulting from contributing scenario ES5-CS4:**

Inhalation (steam). 8 hours on average 3ppm. Risk characterization report: 0.84. !da duplicazione! 15 minutes average 12ppm. Risk characterization report: 0.24. Dermal: 0.69 mg/kg/d.

##### **Exposure resulting from contributing scenario ES5-CS5:**

Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 6.9 mg/kg/d.

##### **Exposure resulting from contributing scenario ES5-CS6:**

Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 14 mg/kg/d.

##### **Exposure resulting from contributing scenario ES5-CS7:**

Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 43 mg/kg/d.

##### **Exposure resulting from contributing scenario ES5-CS8:**

Inhalation (steam). 8 hours on average 10ppm. Risk characterization report: 0,5. 15 minutes average 40ppm. Risk characterization report: 0,8. Dermal: 43 mg/kg/d.

##### **Exposure resulting from contributing scenario ES5-CS9:**

Inhalation (steam). 8 hours on average 10ppm. Risk characterization report: 0,5. 15 minutes average 40ppm. Risk characterization report: 0,8. Dermal: 14 mg/kg/d.

##### **Exposure resulting from contributing scenario ES5-CS10:**

Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 14 mg/kg/d.

**Exposure resulting from contributing scenario ES5-CS11:**

Inhalation (steam). 8 hours on average 7ppm. Risk characterization report: 0.35. 15 minutes average 28ppm. Risk characterization report: 0.56. Dermal: 27 mg/kg/d.

**Exposure resulting from contributing scenario ES5-CS12:**

Inhalation (steam). 8 hours on average 10ppm. Risk characterization report: 0.5. 15 minutes average 40ppm. Risk characterization report: 0.8. Dermal: 14 mg/kg/d.

**Exposure resulting from contributing scenario ES5-CS13:**

Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 0.34 mg/kg/d.

**Exposure resulting from contributing scenario ES5-CS14:**

Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 6.9 mg/kg/d.

The risk management measures described protect against acute exposure.

Dermal: A DNEL cannot be derived for this endpoint. Risk management measures are based on qualitative risk characterisation [G37].

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects [G32]. Risk management measures are based on qualitative risk characterisation [G37].

Available hazard data do not enable the derivation of a DNEL for eye irritant effects [G45].

## SECTION 4: GUIDE FOR VERIFYING COMPLIANCE WITH THE EXPOSURE SCENARIO

**Environment:**

Msafe: 32900kg/d. Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures [DSU1].

$$\frac{m_{spERC} * (1 - E_{ER,spERC}) * F_{release,spERC}}{DF_{spERC}} \geq \frac{m_{site} * (1 - E_{ER,site}) * F_{release,site}}{DF_{site}}$$

where:

mSPERC: frequency of substance use in the spERC.

EER,SPERC: efficacy of RMM in SPERC.

Frelease,SPERC: initial release fraction in spERC.

DFSPERC: dilution factor in the river of the wastewater treatment plant effluent.

m<sub>site</sub>: frequency of use of the substance at the site.

EER,site: effectiveness of RMM at the site.

Frelease,,site: Initial release fraction at the site.

DF<sub>site</sub>: dilution factor in the river of the wastewater treatment plant effluent.

**Health:**

Inhalation (steam). No correction required as all exposures are assumed to be 8 hours long (worst case assumption). No correction is required as all exposures are assumed to result from substance concentrations up to 100%.

Dermal: Not applicable.

## EXPOSURE SCENARIO 6: USE IN COATINGS.

Based on the ECHA CSA&IR template, part D of June 2008 combined with the GES narrative file.

### SECTION 1

**Title:** 2-butoxyethanol. Use in coatings.

Life Cycle Stage (LCS): Generalized use by professional operators.

Environmental release category: ERC8a, ERC8d.; ESVOG SpERC 8.3b.v1

Process category: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15, PROC19.

Processes, tasks and activities including: Covers the use in coatings (paints, inks, adhesives, etc.), including exposures during use (materials receipt, storage, preparation and transfer of bulk and semi-bulk application by spray, roller, brush or manual spreader or similar methods and film formation), cleaning and maintenance of equipment and associated laboratory activities [GES3\_P].

Evaluation method: Health: ECETOC TRA model used [EE1]. Environment: ECETOC TRA model used [EE1]. SPERC ESVOG used.

### SECTION 2: OPERATING CONDITIONS AND RISK MANAGEMENT MEASURES.

#### SECTION 2.1: Environmental exposure control:

Product features: The substance has a unique structure [PrC1]. Non-hydrophobic [PrC4b]. Liquid, vapor pressure <0.5 kPa under standard conditions [OC3]. Miscible in water. Virtually non-toxic to aquatic species. Readily biodegradable [PrC5a]. Low bioaccumulation potential.

Amount used per site (tonnes per year): Not applicable. Dispersive use [FD3].

Frequency and duration of use: Continuous process [CS54]. 365 days per year of activity.

Other given operational conditions affecting environmental exposure: No specific measures required. Dispersive use [FD3].

Local technical conditions and measures to reduce and limit discharges and air emissions: Treatment of air emissions is not required for REACH compliance but may be required to comply with other environmental legislation. To control aerosol emissions into the air use a scrubber or dry filtration system. All wastewater must be discharged to municipal sewage treatment plants or collected and sent for waste disposal. Assumes no on-site wastewater treatment.

Organizational measures to prevent/limit release from a site: Construct a containment basin around storage facilities to prevent soil and water pollution in the event of spillage [S5]. Prevent environmental discharge consistent with regulatory requirements [OMS4].

Conditions and measures for the disposal of articles at end of their service life: Estimated quantity of waste treated - not exceeding: 10%. Type of treatment suitable for waste: incineration. Removal Effectiveness (%): 99,98. Treat as hazardous waste. External treatment and disposal of waste should comply with applicable local and/or national regulations [ETW3]. Dispose of waste or used containers in accordance with local regulations [ENVT12].

Conditions and measures for the recovery of articles at the end of their service life: Not applicable.

Other environmental control measures in addition to those described above: none.

#### SECTION 2.2: Worker exposure control.

##### Product features:

Physical state of the product: Liquid, vapor pressure <0.5 kPa under standard conditions [OC3].

Concentration of the substance in the product: Covers a percentage substance in the product up to 100% (unless otherwise stated) [G13].

Amounts used: Not applicable.

Frequency and duration of use: Covers a daily exposure up to 8 hours (unless otherwise specified) [G2]. Continuous process [CS54].

Human factors not influenced by risk management: none.

Other given operational conditions affecting workers exposure: Assumes a good basic standard of occupational hygiene has been implemented [G1]. Assumes use of the product at not more than 20°C above ambient temperature, unless otherwise specified [G15].

Technical conditions and process-level (source) measures and technical conditions and measures to control dispersion from the source to the worker: none.

##### Contributing scenarios:

General measures (skin irritants) [G19]: Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Immediately remove any contamination with skin. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop [E3]. Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying. [E4].

General measures (eye irritants) [G44]: Use suitable eye protection [PPE26]. Avoid direct eye contact with product, also via contamination on hands [E73]. Avoid splashing [C&H15].

ES6-CS1: PROC1 General exposures (closed systems) [CS15]. No other specific measures identified [EI20].

ES6-CS2: PROC2 Filling of equipment from drums or containers, [CS45]. No other specific measures identified [EI20].

ES6-CS3: PROC2 General exposures (closed systems) [CS15]. Use in systems under containment [CS38]. No other specific measures identified [EI20].

ES6-CS4: PROC3 Preparation of material for application [CS96]. Mixing operations (closed systems) [CS29]. Batch process [CS55]. No other specific measures identified [EI20].

ES6-CS5: PROC4 Film formation - air drying [CS95]. Indoor [OC8]. No other specific measures identified [EI20].

ES6-CS6: PROC4 Film formation - air drying [CS95]. Outdoors [OC9]. Make sure the operation is performed outdoors [E69].

ES6-CS7: PROC5 Preparation of material for application [CS96]. Mixing operations (open systems) [CS30]. Indoor [OC8]. No other specific measures identified [EI20].

ES6-CS8: PROC5 Preparation of material for application [CS96]. Mixing operations (open systems) [CS30]. Outdoors [OC9]. Make sure the operation is performed outdoors [E69].

ES6-CS9: PROC8a Material transfers [CS3]. Pouring from small containers [CS9]. (open systems) [CS108]. Provide extract ventilation at points where emissions occur [E54].

ES6-CS10: PROC8b Material transfers [CS3]. Pouring from small containers [CS9]. (closed systems) [CS107]. No other specific measures identified [EI20].

ES6-CS11: PROC10 Roller application, spreader, flow [CS98]. Indoor [OC8]. Provide extract ventilation at points where emissions occur [E54].

ES6-CS12: PROC10 Roller application, spreader, flow [CS98]. Outdoors [OC9]. Make sure the operation is performed outdoors [E69]. Limit the substance content in the product to 25% [OC18].

ES6-CS13: PROC11 Spray application [CS10]. Manual [CS34]. Indoor [OC8]. Carry out in a vented booth or extracted enclosure [E57]. Limit the substance content in the product to 25% [OC18].

ES6-CS14: PROC11 Spray application [CS10]. Manual [CS34]. Outdoors [OC9]. Make sure the operation is performed outdoors [E69]. Wear a respirator conforming to EN140 with a type A filter or better [PPE22]. Change the filter cartridge on the respirator daily [PPE25].

ES6-CS15: PROC13 Dipping and pouring [CS4]. Provide a good standard of general ventilation (not less than 3-5 air changes per hour) [E11]. or, Make sure the operation is performed outdoors [E69].

ES6-CS16: PROC19 Dipping and pouring [CS4]. Outdoors [OC9]. Provide a good standard of general ventilation (not less than 3-5 air changes per hour) [E11]. or, Make sure the operation is performed outdoors [E69]. Limit the substance content in the product to 25% [OC18].

ES6-CS17: PROC15 Laboratory activity [CS36]. No other specific measures identified [E120].

## SECTION 3: EXPOSURE ESTIMATION:

### *Maximum exposure resulting from the contributing scenarios described.*

#### **Environment:**

**ES6-ES1:** ERC8a, ERC8d

Conditions given in SPERC fact sheet give rise to following releases fractions [OOC29]. (ESVOC SpERC 8.3b.v1).

Fraction released to air from highly dispersive use (regional only) [OOC7]: 0.98.

Fraction released to wastewater from highly dispersive use [OOC8]: 0.01.

Fraction released into soil by highly dispersive use (regional only) [OOC9]: 0.01.

PEC of microorganisms in wastewater treatment plant: 2,74E-03mg/l. Risk characterization report: 5.92E-06.

Local PEC in surface water: 5.98E-03mg/l. Risk characterization report: 6.80E-04.

Local PEC in freshwater sediments: 2.54E-02mg/kgdw. Risk characterization report: 7.34E-04.

Local PEC in seawater during the release episode: 6,50E-04mg/l. Risk characterization report: 7.39E-04.

Local PEC in marine sediments: 2.77E-03mg/kgdw. Risk characterization report: 8.01E-04.

Local PEC in soil: 2.13E-02mg/kgdw. Risk characterization report: 9.14E-03. Risk from environmental exposure is driven by soil [TCR1f].

#### **Health:**

**Exposure resulting from contributing scenario ES6-CS1:**

Inhalation (steam). 8 hours on average 0.01ppm. Risk characterization report: <0.001. 15 minutes average 0.04ppm. Risk characterization report: <0.001. Dermal: 0.03 mg/kg/d.

**Exposure resulting from contributing scenario ES6-CS2:**

Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 1.4 mg/kg/d.

**Exposure resulting from contributing scenario ES6-CS3:**

Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 1.4 mg/kg/d.

**Exposure resulting from contributing scenario ES6-CS4:**

Inhalation (steam). 8 hours on average 3ppm. Risk characterization report: 0.84. !da duplicazione! 15 minutes average 12ppm. Risk characterization report: 0,24. Dermal: 0.69 mg/kg/d.

**Exposure resulting from contributing scenario ES6-CS5:**

Inhalation (steam). 8 hours on average 10ppm. Risk characterization report: 0.5. 15 minutes average 40ppm. Risk characterization report: 0.8. Dermal: 6.9 mg/kg/d.

**Exposure resulting from contributing scenario ES6-CS6:**

Inhalation (steam). 8 hours on average 7ppm. Risk characterization report: 0.35. 15 minutes average 28ppm. Risk characterization report: 0.56. Dermal: 6.9 mg/kg/d.

**Exposure resulting from contributing scenario ES6-CS7:**

Inhalation (steam). 8 hours on average 10ppm. Risk characterization report: 0,5. 15 minutes average 40ppm. Risk characterization report: 0,8. Dermal: 14 mg/kg/d.

**Exposure resulting from contributing scenario ES6-CS8:**

Inhalation (steam). 8 hours on average 7ppm. Risk characterization report: 0.35. 15 minutes average 28ppm. Risk characterization report: 0,56. Dermal: 14 mg/kg/d.

**Exposure resulting from contributing scenario ES6-CS9:**

Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 14 mg/kg/d.

**Exposure resulting from contributing scenario ES6-CS10:**

Inhalation (steam). 8 hours on average 10ppm. Risk characterization report: 0,5. 15 minutes average 40ppm. Risk characterization report: 0,8. Dermal: 14 mg/kg/d.

**Exposure resulting from contributing scenario ES6-CS11:**

Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 27 mg/kg/d.

**Exposure resulting from contributing scenario ES6-CS12:**

Inhalation (steam). 8 hours on average 11ppm. Risk characterization report: 0.525. 15 minutes average 42ppm. Risk characterization report: 0.84. Dermal: 16 mg/kg/d.

**Exposure resulting from contributing scenario ES6-CS13:**

Inhalation (steam). 8 hours on average 12ppm. Risk characterization report: 0.6. 15 minutes average 48ppm. Risk characterization report: 0.96. Dermal: 64 mg/kg/d.

**Exposure resulting from contributing scenario ES6-CS14:**

Inhalation (steam). 8 hours on average 7ppm. Risk characterization report: 0.35. 15 minutes average 28ppm. Risk characterization report: 0.56. Dermal: 110 mg/kg/d.

**Exposure resulting from contributing scenario ES6-CS15:**

Inhalation (steam). 8 hours on average 7ppm. Risk characterization report: 0.35. 15 minutes average 28ppm. Risk characterization report: 0,56. Dermal: 14 mg/kg/d.

**Exposure resulting from contributing scenario ES6-CS16:**

Inhalation (steam). 8 hours on average 11ppm. Risk characterization report: 0.525. 15 minutes average 42ppm. Risk characterization report: 0.84. Dermal: 85 mg/kg/d.

**Exposure resulting from contributing scenario ES6-CS17:**

Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0,4. Dermal: 0.34 mg/kg/d.

The risk management measures described protect against acute exposure.

Dermal: A DNEL cannot be derived for this endpoint. Risk management measures are based on qualitative risk characterisation [G37].

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects [G32]. Risk management measures are based on qualitative risk characterisation [G37].

Available hazard data do not enable the derivation of a DNEL for eye irritant effects [G45].

## SECTION 4: GUIDE FOR VERIFYING COMPLIANCE WITH THE EXPOSURE SCENARIO

**Environment:**

Msafe: 59.9kg/g. Not applicable for highly dispersive uses [DSU5].

**Health:**

Inhalation (steam). No correction required as all exposures are assumed to be 8 hours long (worst case assumption). To go from a concentration of 5-25% to a concentration of 100%, multiply by 1.7.

Dermal: Not applicable.



## EXPOSURE SCENARIO 8: USE IN CLEANING PRODUCTS.

Based on the ECHA CSA&IR template, part D of June 2008 combined with the GES narrative file.

### SECTION 1

**Title:** 2-butoxyethanol. Use in cleaning products.

Life Cycle Stage (LCS): Generalized use by professional operators.

Environmental release category: ERC8a, ERC8d.; ESVOC SpERC 8.4c.v1

Process category: PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC10, PROC11, PROC13.

Processes, tasks and activities including: Covers the use as a component of cleaning products including pouring/unloading from drums or containers; and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping automated and by hand) [GES4\_P].

Evaluation method: Health: ECETOC TRA model used [EE1]. Environment: ECETOC TRA model used [EE1]. SPERC ESVOC used.

### SECTION 2: OPERATING CONDITIONS AND RISK MANAGEMENT MEASURES.

#### SECTION 2.1 Environmental exposure control:

Product features: The substance has a unique structure [PrC1]. Non-hydrophobic [PrC4b]. Liquid, vapor pressure <0.5 kPa under standard conditions [OC3]. Miscible in water. Virtually non-toxic to aquatic species. Readily biodegradable [PrC5a]. Low bioaccumulation potential.

Amount used per site (tonnes per year): Not applicable. Dispersive use [FD3].

Frequency and duration of use: Continuous process [CS54]. 365 days per year of activity.

Other given operational conditions affecting environmental exposure: No specific measures required. Dispersive use [FD3].

Local technical conditions and measures to reduce and limit discharges and air emissions: No air emission control required; required removal efficiency of 0% [TCR5].

No waste water treatment required [TCR6]. Assumes no on-site wastewater treatment.

Organizational measures to prevent/limit release from a site: Construct a containment basin around storage facilities to prevent soil and water pollution in the event of spillage [S5]. Prevent environmental discharge consistent with regulatory requirements [OMS4].

Conditions and measures for the disposal of articles at end of their service life: Estimated quantity of waste treated - not exceeding: 10%. Type of treatment suitable for waste: incineration. Removal Effectiveness (%): 99,98. Treat as hazardous waste. External treatment and disposal of waste should comply with applicable local and/or national regulations [ETW3]. Dispose of waste or used containers in accordance with local regulations [ENVT12].

Conditions and measures for the recovery of articles at the end of their service life. Not applicable.

Other environmental control measures in addition to those described above: none.

#### SECTION 2.2: Worker exposure control.

##### Product features:

Physical state of the product: Liquid, vapor pressure <0.5 kPa under standard conditions [OC3].

Concentration of the substance in the product: Covers a percentage substance in the product up to 100% (unless otherwise stated) [G13].

Amounts used: Not applicable.

Frequency and duration of use: Covers a daily exposure up to 8 hours (unless otherwise specified) [G2]. Continuous process [CS54].

Human factors not influenced by risk management: none.

Other given operational conditions affecting workers exposure: Assumes a good basic standard of occupational hygiene has been implemented [G1]. Assumes use of the product at not more than 20°C above ambient temperature, unless otherwise specified [G15].

Technical conditions and process-level (source) measures and technical conditions and measures to control dispersion from the source to the worker: none.

##### Contributing scenarios:

General measures (skin irritants) [G19]: Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Immediately remove any contamination with skin. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop [E3]. Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying. [E4].

General measures (eye irritants) [G44]: Use suitable eye protection [PPE26]. Avoid direct eye contact with product, also via contamination on hands [E73]. Avoid splashing [C&H15].

ES8-CS1: PROC8b Filling of equipment from drums or containers, [CS45]. No other specific measures identified [EI20].

ES8-CS2: PROC2 Automated process with (semi) closed systems [CS93]. Use in systems under containment [CS38]. No other specific measures identified [EI20].

ES8-CS3: PROC3 Automated process with (semi) closed systems [CS93]. Use in systems under containment [CS38]. Batch process [CS55]. No other specific measures identified [EI20].

ES8-CS4: PROC4 Maintenance (of larger plant items) and machine set up [CS77]. Use in systems under containment [CS38]. No other specific measures identified [EI20].

ES8-CS5: PROC4 Cleaning of medical devices [CS74]. Provide a good standard of general ventilation (not less than 3-5 air changes per hour) [E11]. Limit the substance content in the product to 25% [OC18].

ES8-CS6: PROC13 Surfaces [CS48]. Cleaning [CS47]. Dipping and pouring [CS4]. Manual [CS34]. No other specific measures identified [EI20].

ES8-CS7: PROC10 Cleaning with low-pressure washers [CS42]. No spraying [CS60]. Provide a good standard of general ventilation (not less than 3-5 air changes per hour) [E11], or, Make sure the operation is performed outdoors [E69]. Limit the substance content in the product to 25% [OC18].

ES8-CS8: PROC11 Cleaning with high pressure washers [CS44]. Indoor [OC8]. Spray application [CS10]. Carry out in a vented booth or extracted enclosure [E57]. Limit the substance content in the product to 25% [OC18].

ES8-CS9: PROC11 Cleaning with high pressure washers [CS44]. Outdoors [OC9]. Spray application [CS10]. Make sure the operation is performed outdoors [E69]. Wear a respirator conforming to EN140 with a type A filter or better [PPE22]. Change the filter cartridge on the respirator daily [PPE25]. Limit the substance content in the product to 25% [OC18].

ES8-CS10: PROC11 Surfaces [CS48]. Cleaning [CS47]. Manual [CS34]. Spray application [CS10]. Provide a good standard of controlled ventilation (10-15 air changes per hour) [E40]. Limit the substance content in the product to 5% [OC17], or, Wear a respirator conforming to EN140 with a type A filter or better [PPE22].

ES8-CS11: PROC10 Ad hoc manual application via trigger sprays, dipping, etc. [CS27]. Rolling, brushing [CS51]. With local ventilation systems [CS109]. Provide extract ventilation at points where emissions occur [E54].

ES8-CS12: PROC10 Ad hoc manual application via trigger sprays, dipping, etc. [CS27]. Rolling, brushing [CS51]. Without local ventilation systems [CS110]. Provide a good standard of general ventilation (not less than 3-5 air changes per hour) [E11]. Limit the substance content in the product to 25% [OC18]. or, Wear a full face respirator conforming to EN140 with type A filter or better [PPE24].

ES8-CS13: PROC4 Application of cleaning products in closed systems [CS101]. Provide a good standard of general ventilation (not less than 3-5 air changes per hour) [E11].

ES8-CS14: PROC8a Filling of equipment from drums or containers, [CS45]. Provide a good standard of general ventilation (not less than 3-5 air changes per hour) [E11]. or, Make sure the operation is performed outdoors [E69]. Limit the substance content in the product to 25% [OC18].

## SECTION 3: EXPOSURE ESTIMATION:

### *Maximum exposure resulting from the contributing scenarios described.*

#### **Environment**

**ES8-ES1:** ERC8a, ERC8d.

Conditions given in SPERC fact sheet give rise to following releases fractions [OOC29]. (ESVOC SpERC 8.4c.v1).

Fraction released to air from highly dispersive use (regional only) [OOC7]: 0.95.

Fraction released to wastewater from highly dispersive use [OOC8]: 0,025.

Fraction released into soil by highly dispersive use (regional only) [OOC9]: 0.025.

PEC of microorganisms in wastewater treatment plant: 5.14E-03mg/l. Risk characterization report: 1.11E-05.

Local PEC in surface water: 6.01E-03mg/l. Risk characterization report: 6.83E-04.

Local PEC in freshwater sediments: 2.56E-02mg/kgdw. Risk characterization report: 7.40E-04.

Local PEC in seawater during the release episode: 6.53E-04mg/l. Risk characterization report: 7.42E-04.

Local PEC in marine sediments: 2.78E-03mg/kgdw. Risk characterization report: 8.03E-04.

Local PEC in soil: 2.13E-02mg/kgdw. Risk characterization report: 9.14E-03. Risk from environmental exposure is driven by soil [TCR1f].

#### **Health:**

##### **Exposure resulting from contributing scenario ES8-CS1:**

Inhalation (steam). 8 hours on average 10ppm. Risk characterization report: <0.5. 15 minutes average 40ppm. Risk characterization report: 0.8. Dermal: 14mg/kg/d.

##### **Exposure resulting from contributing scenario ES8-CS2:**

Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 1.4 mg/kg/d.

##### **Exposure resulting from contributing scenario ES8-CS3:**

Inhalation (steam). 8 hours on average 3ppm. Risk characterization report: 0.84. !da duplicazione! 15 minutes average 12ppm. Risk characterization report: 0,24. Dermal: 0.69mg/kg/d.

##### **Exposure resulting from contributing scenario ES8-CS4:**

Inhalation (steam). 8 hours on average 10ppm. Risk characterization report: 0.5. 15 minutes average 40ppm. Risk characterization report: 0.8. Dermal: 6.9 mg/kg/d.

##### **Exposure resulting from contributing scenario ES8-CS5:**

Inhalation (steam). 8 hours on average 4.2ppm. Risk characterization report: 0.21. 15 minutes average 16.8ppm. Risk characterization report: 0.34. Dermal: 4.1 mg/kg/d.

##### **Exposure resulting from contributing scenario ES8-CS6:**

Inhalation (steam). 8 hours on average 10ppm. Risk characterization report: 0.5. 15 minutes average 40ppm. Risk characterization report: 0.8. Dermal: 14 mg/kg/d.

##### **Exposure resulting from contributing scenario ES8-CS7:**

Inhalation (steam). 8 hours on average 11ppm. Risk characterization report: 0.525. 15 minutes average 42ppm. Risk characterization report: 0.84. Dermal: 16 mg/kg/d.

##### **Exposure resulting from contributing scenario ES8-CS8:**

Inhalation (steam). 8 hours on average 12ppm. Risk characterization report: 0.6. 15 minutes average 48ppm. Risk characterization report: 0.96. Dermal: 64 mg/kg/d.

##### **Exposure resulting from contributing scenario ES8-CS9:**

Inhalation (steam). 8 hours on average 4.2ppm. Risk characterization report: 0.21. 15 minutes average 16.8ppm. Risk characterization report: 0,34. Dermal: 64 mg/kg/d.

##### **Exposure resulting from contributing scenario ES8-CS10:**

Inhalation (steam). 8 hours on average 6ppm. Risk characterization report: 0.3. 15 minutes average 24ppm. Risk characterization report: 0.48. Dermal: 21 mg/kg/d.

##### **Exposure resulting from contributing scenario ES8-CS11:**

Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 27 mg/kg/d.

##### **Exposure resulting from contributing scenario ES8-CS12:**

Inhalation (steam). 8 hours on average 11ppm. Risk characterization report: 0.525. 15 minutes average 42ppm. Risk characterization report: 0.84. Dermal: 16 mg/kg/d.

##### **Exposure resulting from contributing scenario ES8-CS13:**

Inhalation (steam). 8 hours on average 7ppm. Risk characterization report: 0.35. 15 minutes average 28ppm. Risk characterization report: 0.56. Dermal: 6.9 mg/kg/d.

##### **Exposure resulting from contributing scenario ES8-CS14:**

Inhalation (steam). 8 hours on average 11ppm. Risk characterization report: 0.525. 15 minutes average 42ppm. Risk characterization report: 0.84. Dermal: 8.2 mg/kg/d.

The risk management measures described protect against acute exposure.

Dermal: A DNEL cannot be derived for this endpoint. Risk management measures are based on qualitative risk characterisation [G37].

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects [G32]. Risk management measures are based on qualitative risk characterisation [G37].

Available hazard data do not enable the derivation of a DNEL for eye irritant effects [G45].

## SECTION 4: GUIDE FOR VERIFYING COMPLIANCE WITH THE EXPOSURE SCENARIO

### **Environment:**

Msafe: 59.9kg/g. Not applicable for highly dispersive uses [DSU5].

### **Health:**

Inhalation (steam). No correction required as all exposures are assumed to be 8 hours long (worst case assumption). To go from a concentration of 5-25% to a concentration of 100%, multiply by 1.7. To go from a concentration of 1-5% to a concentration of 5-25%, multiply by 3.

Dermal: Not applicable.