

B0503

Safety Data Sheet

according to Regulation (EU) 2015/830

Reference number: B0503

Issue date: 26/06/2023 Revision date: 26/06/2023 Supersedes version of: 21/01/2021 Version: 3.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance Trade name : Boric acid Chemical name : Boric acid : 005-007-00-2 EC Index-No. EC-No. : 233-139-2 CAS-No. : 10043-35-3 Product code : B0503 Formula : BH₃O₃

Synonyms : Acidum boricum
Other means of identification : Boric acid

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use

Industrial/Professional use spec : For professional use only. Duchefa Biochemie B.V. products are intended only

for "in vitro laboratory" research purposes.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

Duchefa Biochemie B.V. A. Hofmanweg 71 2031 BH Haarlem The Netherlands

T +31(0)23-5319093 - F +31(0)23-5318027

info@duchefa.nl

1.4. Emergency telephone number

Emergency number : Supplier contact information:

+31(0)23-5319093 (M-F 09:00-17:00) +31(0)6-30109355 (outside office hours)

Country	Organisation/Company	Address	Emergency number	Comment
Belgium	Centre Anti- Poisons/Antigifcentrum c/o Hôpital Militaire Reine Astrid	Rue Bruyn 1 1120 Brussels	+32 70 245 245	Please dial: 070 245 245 for any urgent questions about intoxication (free of charge 24/7), if not accessible, dial: 02 264 96 30 (standard fee)
South Africa	World Health Organization world directory of poison centres	http://apps.who.int/poiso ncentres/		Check website for a local poison control center
United Kingdom	World Health Organization world directory of poison centres	http://apps.who.int/poiso ncentres/		Consult website for a local poison centre

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Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	Only for healthcare professionals
United States of America	World Health Organization world directory of poison centres	http://apps.who.int/poiso ncentres/		Check website for a local poison control center

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Reproductive toxicity, Category 1B H360FD

Full text of H- and EUH-statements: see section 16

Specific concentration limits:

 $(5,5 \le C \le 100)$ Repr. 1B, H360FD

Adverse physicochemical, human health and environmental effects

May damage fertility or the unborn child.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS08

Signal word (CLP) : Danger

Hazard statements (CLP) : H360FD - May damage fertility. May damage the unborn child.

Precautionary statements (CLP) : P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and

understood.

P280 - Wear protective gloves/protective clothing/eye protection/face

protection.

P308+P313 - IF exposed or concerned: Get medical advice/attention.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent Name : Boric acid CAS-No. : 10043-35-3 EC-No. : 233-139-2 EC Index-No. : 005-007-00-2

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Name	Product identifier	%
Boric acid substance listed as REACH Candidate	CAS-No.: 10043-35-3 EC-No.: 233-139-2 EC Index-No.: 005-007- 00-2	≥ 99

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Get immediate

medical advice/attention.

First-aid measures after skin contact : After contact with skin, take off immediately all contaminated clothing, and

wash immediately with plenty of water. Get immediate medical

advice/attention.

First-aid measures after eye contact : Rinse immediately with plenty of water. If eye irritation persists, take medical

advice.

First-aid measures after ingestion : Rinse mouth. Give water to drink. Do not induce vomiting. Call a poison center

or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after ingestion : Ingestion may cause nausea, vomiting and diarrhea.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Dry chemical, CO2, or water spray or regular foam.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions

: Prevent fire fighting water from entering the environment.

Protection during firefighting

: Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Spill should be handled by trained cleaning personnel properly equipped with

respiratory and eye protection.

6.1.1. For non-emergency personnel

Protective equipment : Wear suitable protective clothing.

Emergency procedures : Only qualified personnel equipped with suitable protective equipment may

intervene.

Measures in case of dust release : Avoid dust formation.

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6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Do not allow to enter drains or water courses. Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product. Sweep up dry powder and dispose properly.

Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Handle in accordance with good industrial hygiene and safety procedures. Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood. Wear

personal protective equipment.

Hygiene measures : Separate working clothes from town clothes. Launder separately. Do not eat,

drink or smoke when using this product. Always wash hands after handling the

product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep container tightly closed. Store at room

temperature. Store locked up. Store in a well-ventilated place. Keep cool.

Storage temperature : 15 - 25 °C

7.3. Specific end use(s)

For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Boric acid (10043-35-3)			
Austria - Occupational Exposure Limits			
Local name	Borsäure (Orthoborsäure)		
Remark	Fortpflanzungsgefährdend: F, D		
Regulatory reference	BGBI. II Nr. 156/2021		
Germany - Occupational Exposure Limits (TRGS 900)			
Local name	Borsäure und Natriumborate		
AGW (OEL TWA) [1]	0,5 mg/m³ (E)		
Peak exposure limitation factor	2(I)		

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Remark	AGS - Ausschuss für Gefahrstoffe; Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden; 10 - Der Arbeitsplatzgrenzwert bezieht sich auf den Elementgehalt des entsprechenden Metalls	
Regulatory reference	TRGS900	
Ireland - Occupational Exposure Limits		
Local name	Borate compounds inorganic: Boric acid	
OEL TWA [1]	2 mg/m³	
Remark	Repr.1B (Substances which are presumed human reproductive toxicants)	
Regulatory reference	Chemical Agents Code of Practice 2021	
Latvia - Occupational Exposure Limits		
Local name	Borskābe	
OEL TWA	10 mg/m ³	
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325	
Lithuania - Occupational Exposure Limits		
Local name	Boro rūgštis	
IPRV (OEL TWA)	10 mg/m ³	
Remark	R (reprodukcijai toksiškas poveikis)	
Regulatory reference	te LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-695/A1-272, 2018-06-12	
Portugal - Occupational Exposure Limits		
Local name	Boratos, compostos inorgânicos	
OEL TWA	2 mg/m³ I (Fraçao inalável)	
OEL STEL	6 mg/m³ I (Fraçao inalável)	
Remark	A4 (Agente não classificável como carcinogénico no Homem)	
Regulatory reference	Norma Portuguesa NP 1796:2014	
Slovenia - Occupational Exposure Limits		
Local name	borova kislina in natrijev borat	
OEL TWA	0,5 mg/m³	
OEL STEL	1 mg/m ³	
Remark	Y (Snovi, pri katerih ni nevarnosti za zarodek ob upoštevanju mejnih vrednosti in bat vrednosti)	
Regulatory reference	Uradni list RS, št. 72/2021 z dne 11.5.2021	
Spain - Occupational Exposure Limits		
Local name	Ácido bórico	
VLA-ED (OEL TWA) [1]	2 mg/m ³	
VLA-EC (OEL STEL)	6 mg/m ³	

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Remark	TR1B (Cuando las pruebas utilizadas para la clasificación procedan principalmente de datos en animales), s (Esta sustancia tiene prohibida total o parcialmente su comercialización y uso como fitosanitario y/o como biocida. Para una información detallada acerca de las prohibiciones consúltese: Base de datos de productos biocidas: http://www.msssi.gob.es/ciudadanos/productos.do?tipo=plaguicidas Base de datos de productos fitosanitarios http://www.magrama.gob.es/agricultura/pags/fitos/registro/fichas/pdf/Lista_s a.pdf), r (Esta sustancia tiene establecidas restricciones a la fabricación, la comercialización o el uso en los términos especificados en el "Reglamento (CE) nº 1907/2006 sobre Registro, Evaluación, Autorización y Restricción de sustancias y preparados químicos" (REACH) de 18 de diciembre de 2006 (DOUE L 369 de 30 de diciembre de 2006). Las restricciones de una sustancia pueden aplicarse a todos los usos o sólo a usos concretos. El anexo XVII del Reglamento REACH contiene la lista de todas las sustancias restringidas y especifica los usos que se han restringido).
Regulatory reference Límites de Exposición Profesional para Agentes Químicos en España 2 INSHT	
Switzerland - Occupational Exposure Limits	
Local name	Acide borique / Borsäure
MAK (OEL TWA) [1]	1,8 mg/m³ (i) / (e)
KZGW (OEL STEL)	1,8 mg/m³ (i) / (e)
Critical toxicity	VRS / OAW
Notation	R1 _{BD} , R1 _{BF} , SS _B / R1 _{BD} , R1 _{BF} , SS _B
Remark	NIOSH
Regulatory reference	www.suva.ch, 01.01.2023
USA - ACGIH - Occupational Exposure Limit	s
Local name	Boric acid
ACGIH OEL TWA	2 mg/m³ (I - Inhalable particulate matter)
ACGIH OEL STEL	6 mg/m³ (I - Inhalable particulate matter)
Remark (ACGIH)	TLV® Basis: URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2023

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

Boric acid (10043-35-3)		
DNEL/DMEL (Workers)		
Long-term - systemic effects, dermal	392 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	8,3 mg/m³	
DNEL/DMEL (General population)		
Acute - systemic effects, oral	0,98 mg/kg bodyweight/day	
Long-term - systemic effects,oral	0,98 mg/kg bodyweight/day	

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Boric acid (10043-35-3)			
Long-term - systemic effects, inhalation	4,15 mg/m³		
Long-term - systemic effects, dermal	196 mg/kg bodyweight/day		
PNEC (Water)	PNEC (Water)		
PNEC aqua (freshwater)	2,9 mg/l		
PNEC aqua (marine water)	2,9 mg/l		
PNEC aqua (intermittent, freshwater)	13,7 mg/l		
PNEC (Soil)			
PNEC soil	5,7 mg/kg dwt		
PNEC (STP)			
PNEC sewage treatment plant	10 mg/l		

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):







8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses

Eye protection				
Туре	Field of application	Characteristics	Standard	
Safety glasses	Dust		EN 166	

8.2.2.2. Skin protection

Skin and body protection:

Protective clothing (with elasticated cuffs and closed neck)

Hand protection:

Protective gloves

Hand protection					
Туре	Material	Permeation	Thickness (mm)	Penetration	Standard
Gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0,11		EN ISO 374

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8.2.2.3. Respiratory protection

Respiratory protection			
Device	Filter type	Condition	Standard
Dust mask	Type P3	Dust protection	EN 143

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Crystalline powder.

Molecular mass : 61,83 g/mol

Colour : White.

Odour : Odourless.

Odour threshold : No data available

pH : 5,1

Relative evaporation rate (butylacetate=1) : No data available

Melting point : 171 °C
Freezing point : Not applicable
Boiling point : No data available
Flash point : Not applicable
Auto-ignition temperature : Not applicable
Decomposition temperature : 170 - 180 °C
Flammability (solid, gas) : Non flammable.

Vapour pressure : 0,0000099 Pa Temp.: 25 °C

Relative vapour density at 20°C : No data available

Relative density : 1,4

Density : 1489 kg/m³ Type: 'density' Temp.: 23 °C

Solubility : Water: 5 g/100ml

Partition coefficient n-octanol/water (Log : 0,18

Pow)

Viscosity, kinematic : Not applicable
Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidising properties : No data available
Explosive limits : Not applicable

9.2. Other information

Bulk density : 500 kg/m^3

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

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10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

When heated to decomposition, emits dangerous fumes.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity (oral) : Not classified Acute toxicity (dermal) : Not classified Acute toxicity (inhalation) : Not classified

Boric acid (10043-35-3)	
LD50 oral rat	> 2600 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: EU Method B.1 (Acute Toxicity (Oral))
LD50 oral	3450 mg/kg (mouse)
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: other:
LC50 Inhalation - Rat	> 2,12 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Guideline: other:

: Not classified Skin corrosion/irritation

pH: 5,1

Serious eye damage/irritation : Not classified

pH: 5,1

Respiratory or skin sensitisation : Not classified Germ cell mutagenicity : Not classified Carcinogenicity : Not classified

Reproductive toxicity : May damage fertility. May damage the unborn child.

STOT-single exposure : Not classified STOT-repeated exposure : Not classified Aspiration hazard : Not classified

Boric acid (10043-35-3)

Viscosity, kinematic Not applicable

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-

term adverse effects in the environment.

Hazardous to the aquatic environment,

short-term (acute)

: Not classified

Hazardous to the aquatic environment, long- : Not classified

term (chronic)

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Boric acid (10043-35-3)	
LC50 - Fish [1]	79,7 mg/l Test organisms (species): Pimephales promelas
LC50 - Fish [2]	74 mg/l Test organisms (species): Limanda limanda
EC50 - Crustacea [1]	133 mg/l
EC50 72h - Algae [1]	66 mg/l Test organisms (species): Phaeodactylum tricornutum
EC50 72h - Algae [2]	54 mg/l Test organisms (species): Phaeodactylum tricornutum
NOEC chronic fish	6,4 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) Duration: '34 d'

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Boric acid (10043-35-3)	
Partition coefficient n-octanol/water (Log Pow)	0,18

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Boric acid (10043-35-3)		
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII		
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII		
Component		
Boric acid (10043-35-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

12.6. Other adverse effects

Additional information : Prevent entry to sewers and public waters. Avoid release to the environment

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods

: Dispose in a safe manner in accordance with local/national regulations. Avoid release to the environment. Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

14.1 UN number

UN-No. (ADR) : Not regulated UN-No. (IMDG) : Not regulated UN-No. (IATA) : Not regulated

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not regulated

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Proper Shipping Name (IMDG) : Not regulated Proper Shipping Name (IATA) : Not regulated

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not regulated

IMDG

Transport hazard class(es) (IMDG) : Not regulated

IATA

Transport hazard class(es) (IATA) : Not regulated

14.4. Packing group

Packing group (ADR) : Not regulated
Packing group (IMDG) : Not regulated
Packing group (IATA) : Not regulated

14.5. Environmental hazards

Dangerous for the environment : No Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Listed on the REACH Candidate List: Boric acid

Contains substance(s) listed on the REACH Candidate List in concentrations ≥ 0.1 % or SCL: Boric acid (EC 233-139-2, CAS 10043-35-3)

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

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Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Germany

Water hazard class (WGK) Chemicals Prohibition Ordinance

(ChemVerbotsV)

: WGK 1, Slightly hazardous to water (KBwS-Beschluss; ID No. 315).

: This product is subject to ChemVerbotsV Annex 2 Entry 1. The following requirements must be observed: authorization requirement (according to § 6 paragraph 1 sentence 1), basic requirements for carrying out the delivery (according to § 8 paragraph 1, 3 and 4), identification and documentation (according to § 9 paragraph 1 to 3) and exclusion of the shipping route

(according to § 10).

Hazardous Incident Ordinance (12. BImSchV): Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen

SZW-lijst van mutagene stoffen SZW-lijst van reprotoxische stoffen –

Borstvoeding

SZW-lijst van reprotoxische stoffen -

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen -

Ontwikkeling

: The substance is not listed

: The substance is not listed

: The substance is not listed

: Boric acid is listed

: Boric acid is listed

Denmark

Danish National Regulations

: Young people below the age of 18 years are not allowed to use the product Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

No chemical safety assessment has been carried out No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Substance type	Added	
	Remark	Added	
	Flammability	Added	
1.1	Other means of identification	Added	
1.1	Formula	Modified	
2.1	Adverse physicochemical, human health and environmental effects	Added	
2.1	Specific concentration limits (CLP)	Added	

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Indication of changes			
Section	Changed item	Change	Comments
2.2	Hazard symbols	Added	
4.1	First-aid measures general	Added	
4.1	First-aid measures after inhalation	Modified	
4.1	First-aid measures after ingestion	Modified	
4.1	First-aid measures after eye contact	Modified	
4.3	Other medical advice or treatment	Added	
5.3	Protection during firefighting	Modified	
6.1	Protective equipment	Added	
6.1	Emergency procedures	Added	
6.2	Environmental precautions	Modified	
6.3	Other information	Added	
6.3	Methods for cleaning up	Modified	
6.4	Reference to other sections (8, 13)	Added	
7.1	Hygiene measures	Added	
7.1	Precautions for safe handling	Modified	
7.2	Storage temperature	Added	
7.2	Storage conditions	Modified	
8	Regulatory reference	Added	
8	Regulatory reference	Added	
8	Regulatory reference	Added	
8	Regulatory reference	Added	
8	Regulatory reference	Added	
8	Regulatory reference	Added	
8	Regulatory reference	Added	
8	Regulatory reference	Added	
8	Regulatory reference	Added	
8.1	PNEC sewage treatment plant	Added	
8.1	PNEC soil	Added	
8.1	PNEC aqua (marine water)	Added	
8.1	PNEC aqua (freshwater)	Added	
8.1	PNEC aqua (intermittent, freshwater)	Added	
8.1	Long-term - systemic effects,oral	Added	
8.1	Long-term - systemic effects, inhalation	Added	
8.1	Long-term - systemic effects, inhalation	Added	
8.1	Long-term - systemic effects, dermal	Added	
8.1	Long-term - systemic effects, dermal	Added	

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Indication of changes			
Section	Changed item	Change	Comments
8.1	Acute - systemic effects, oral	Added	
8.1	Remark	Added	
8.1	Notation	Added	
8.1	Critical toxicity	Added	
8.1	KZGW (OEL STEL)	Added	
8.1	MAK (OEL TWA) [1]	Added	
8.1	Local name	Added	
8.1	Remark	Added	
8.1	VLA-EC (OEL STEL)	Added	
8.1	VLA-ED (OEL TWA) [1]	Added	
8.1	Local name	Added	
8.1	OEL STEL	Added	
8.1	OEL TWA	Added	
8.1	Local name	Added	
8.1	Remark	Added	
8.1	OEL STEL	Added	
8.1	OEL TWA	Added	
8.1	Local name	Added	
8.1	Remark	Added	
8.1	IPRV (OEL TWA)	Added	
8.1	Local name	Added	
8.1	OEL TWA	Added	
8.1	Local name	Added	
8.1	OEL TWA [1]	Added	
8.1	Remark	Added	
8.1	Local name	Added	
8.1	Regulatory reference	Added	
8.1	Remark	Added	
8.1	Peak exposure limitation factor	Added	
8.1	AGW (OEL TWA) [1]	Added	
8.1	Local name	Added	
8.1	Remark	Added	
8.1	Local name	Added	
8.1	Remark (ACGIH)	Added	
8.1	ACGIH OEL STEL	Added	
8.1	ACGIH OEL TWA	Added	

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Indication of changes			
Section	Changed item	Change	Comments
8.1	Local name	Added	
8.2	Environmental exposure controls	Added	
8.2	Hand protection	Added	
8.2	Appropriate engineering controls	Added	
9.1	Vapour pressure	Added	
9.1	Log Pow	Added	
9.1	Melting point	Added	
9.1	Relative density	Added	
9.1	рН	Added	
9.1	Decomposition temperature	Added	
9.1	Viscosity, kinematic	Added	
9.1	Freezing point	Added	
9.1	Flash point	Added	
9.1	Explosive limits (vol %)	Added	
9.1	Auto-ignition temperature	Added	
9.1	Physical state	Modified	
9.1	Density	Modified	
9.1	Solubility in water	Modified	
10.1	Reactivity	Added	
10.3	Possibility of hazardous reactions	Added	
10.4	Conditions to avoid	Added	
11.1	LD50 dermal rabbit	Added	
11.1	LC50 Inhalation - Rat	Added	
11.1	LD50 oral rat	Modified	
12.1	NOEC chronic fish	Added	
12.1	LC50 - Fish [2]	Added	
12.1	EC50 72h - Algae [2]	Added	
12.1	EC50 72h - Algae [1]	Added	
12.1	Ecology - general	Added	
12.1	LC50 fish 1	Modified	
12.3	Log Pow	Added	
13.1	Waste treatment methods	Modified	
15.2	Chemical safety assessment	Modified	
16	Abbreviations and acronyms	Modified	

Abbreviations and acronyms:	
ATE	Acute Toxicity Estimate

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Abbreviations and ac	cronyms:
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DPD	Dangerous Preparations Directive 1999/45/EC
DSD	Dangerous Substances Directive 67/548/EEC
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
PBT	Persistent Bioaccumulative Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
SDS	Safety Data Sheet
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative

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according to Regulation (EU) 2015/830

Abbreviations and acronyms:	
ED	Endocrine disrupting properties

Data sources

: ECHA (European Chemicals Agency). Supplier. REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Full text of H- and EUH-statements:	
H360FD May damage fertility. May damage the unborn child.	
Repr. 1B Reproductive toxicity, Category 1B	

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