

VA-048

Revision date: 10.10.2022

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

1.1. Product identifier

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

Use of the substance/mixture

engine coolant

Uses advised against

No information available.

1.3. Details of the supplier of the safety data sheet

Company name:	Vierol AG	
Street:	Karlstrasse 19	
Place:	D-26123 Oldenburg	
Telephone:	+49 (0) 441 – 210 20 – 0	Telefax: +49 (0) 441 – 210 20 –111
e-mail:	info@vierol.de	
Internet:	www.vierol.de	

1.4. Emergency telephone

number: Giftinformationszentrum Nord (Göttingen)

+49 (0)551/19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Acute Tox. 4; H302

Repr. 1B; H360FD

STOT RE 2; H373

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

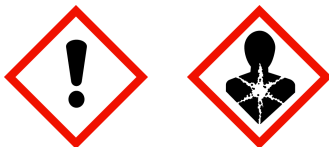
Hazard components for labelling

Ethane-1,2-diol

disodium tetraborate, anhydrous

Signal word: Danger

Pictograms:



Hazard statements

H302

Harmful if swallowed.

H360FD

May damage fertility. May damage the unborn child.

H373

May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P201

Obtain special instructions before use.

P260

Do not breathe dust/fume/gas/mist/vapours/spray.

P280

Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P308+P313

IF exposed or concerned: Get medical advice/attention.

P405

Store locked up.

P501

Dispose of contents / container in accordance with official regulations.

Special labelling of certain mixtures

Restricted to professional users.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Inhibitor, Ethane-1,2-diol

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
107-21-1	Ethane-1,2-diol			75 - 100 %
	203-473-3	603-027-00-1	01-2119456816-28	
	Acute Tox. 4, STOT RE 2; H302 H373			
17265-14-4	Disodium sebacate			1 - < 3 %
	241-300-3		01-2120762063-61	
	Eye Irrit. 2; H319			
19766-89-3	Sodium 2-ethylhexanoate			1 - < 3 %
	243-283-8		01-2119972937-17	
	Repr. 2; H361d			
1330-43-4	disodium tetraborate, anhydrous			0,3 - <= 1 %
	215-540-4		01-2119490790-32	
	Repr. 1B, Eye Irrit. 2; H360FD H319			

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
107-21-1	203-473-3	Ethane-1,2-diol	75 - 100 %
		dermal: LD50 = > 3500 mg/kg; oral: LD50 = 7712 mg/kg	
17265-14-4	241-300-3	Disodium sebacate	1 - < 3 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg	
19766-89-3	243-283-8	Sodium 2-ethylhexanoate	1 - < 3 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = 2043 mg/kg	
1330-43-4	215-540-4	disodium tetraborate, anhydrous	0,3 - <= 1 %
		inhalation: LC50 = > 2,04 mg/l (dusts or mists); dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2500 mg/kg	

Further Information

disodium tetraborate, anhydrous: This substance has been listed as SVHC (substance of very high concern) in the Candidate List according to Article 59 of REACH.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Take off contaminated clothing and wash it before reuse.

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data)

sheet if possible).

After inhalation

Provide fresh air. Medical treatment necessary. Call a doctor if you feel unwell.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap.

In case of skin irritation, consult a physician.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth thoroughly with water.

Let water be drunk in little sips (dilution effect).

Do NOT induce vomiting.

In all cases of doubt, or when symptoms persist, seek medical advice.

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

No information available.

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

Use water spray jet to protect personnel and to cool endangered containers.

Co-ordinate fire-fighting measures to the fire surroundings.

- alcohol resistant foam
- Extinguishing powder
- Water spray jet

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Non-flammable. Formation of toxic gases is possible during heating or in case of fire.

In case of fire may be liberated:

- Carbon monoxide (CO)
- Carbon dioxide (CO₂).
- Pyrolysis products, toxic

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Suppress gases/vapours/mists with water spray jet.

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Dispose of waste according to applicable legislation.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Do not breathe gas/fumes/vapour/spray.

Avoid contact with skin, eyes and clothes.

Use personal protection equipment.

6.2. Environmental precautions

- Do not allow to enter into surface water or drains.
- Do not allow to enter into soil/subsoil.

6.3. Methods and material for containment and cleaning up

For containment

- Stop leak if safe to do so.
- Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up

- Collect in closed and suitable containers for disposal.
- Treat the recovered material as prescribed in the section on waste disposal.
- Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

- Safe handling: see section 7
- Personal protection equipment: see section 8
- Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

- Always close containers tightly after the removal of product.
- Do not put any product-impregnated cleaning rags into your trouser pockets.
- Clear spills immediately.
- Use only in well-ventilated areas.

Advice on protection against fire and explosion

- No special fire protection measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

- Keep container tightly closed and in a well-ventilated place.
- Keep only in the original container. Store in a cool dry place.

Hints on joint storage

- Do not store together with:
 - Materials capable of ignition under almost all normal temperature conditions
 - Explosives

7.3. Specific end use(s)

- engine coolant

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
1330-43-4	Disodium tetraborate, anhydrous	-	1		TWA (8 h)	WEL
107-21-1	Ethane-1,2-diol, vapour	20	52		TWA (8 h)	WEL
		40	104		STEL (15 min)	WEL

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DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
107-21-1	Ethane-1,2-diol			
Worker DNEL, long-term		inhalation	local	35 mg/m³
Worker DNEL, long-term		dermal	systemic	106 mg/kg bw/day
Consumer DNEL, long-term		inhalation	local	7 mg/m³
Consumer DNEL, long-term		dermal	systemic	53 mg/kg bw/day
17265-14-4	Disodium sebacate			
Worker DNEL, long-term		inhalation	systemic	35,26 mg/m³
Worker DNEL, long-term		dermal	systemic	10 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	8,7 mg/m³
Consumer DNEL, long-term		dermal	systemic	5 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	5 mg/kg bw/day
19766-89-3	Sodium 2-ethylhexanoate			
Worker DNEL, long-term		inhalation	systemic	14 mg/m³
Worker DNEL, long-term		dermal	systemic	2 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	3,5 mg/m³
Consumer DNEL, long-term		dermal	systemic	1 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	1 mg/kg bw/day
1330-43-4	disodium tetraborate, anhydrous			
Worker DNEL, long-term		inhalation	systemic	6,7 mg/m³
Worker DNEL, long-term		inhalation	local	17,04 mg/m³
Worker DNEL, acute		inhalation	local	17,04 mg/m³
Worker DNEL, long-term		dermal	systemic	316,4 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	3,4 mg/m³
Consumer DNEL, long-term		inhalation	local	17,04 mg/m³
Consumer DNEL, acute		inhalation	local	17,04 mg/m³
Consumer DNEL, long-term		dermal	systemic	159,5 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,79 mg/kg bw/day

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PNEC values

CAS No	Substance	
Environmental compartment		Value
107-21-1	Ethane-1,2-diol	
Freshwater		10 mg/l
Freshwater (intermittent releases)		10 mg/l
Marine water		1 mg/l
Freshwater sediment		37 mg/kg
Marine sediment		3,7 mg/kg
Micro-organisms in sewage treatment plants (STP)		199,5 mg/l
Soil		1,53 mg/kg
17265-14-4	Disodium sebacate	
Freshwater		0,018 mg/l
Freshwater (intermittent releases)		0,18 mg/l
Marine water		0,002 mg/l
Freshwater sediment		0,548 mg/kg
Marine sediment		0,055 mg/kg
Micro-organisms in sewage treatment plants (STP)		10 mg/l
Soil		0,099 mg/kg
19766-89-3	Sodium 2-ethylhexanoate	
Freshwater		0,36 mg/l
Freshwater (intermittent releases)		0,493 mg/l
Marine water		0,036 mg/l
Freshwater sediment		0,301 mg/kg
Marine sediment		0,03 mg/kg
Micro-organisms in sewage treatment plants (STP)		71,7 mg/l
Soil		0,058 mg/kg
1330-43-4	disodium tetraborate, anhydrous	
Freshwater		2,9 mg/l
Freshwater (intermittent releases)		13,7 mg/l
Marine water		2,9 mg/l
Micro-organisms in sewage treatment plants (STP)		10 mg/l
Soil		5,7 mg/kg

8.2. Exposure controls



Appropriate engineering controls

Provide adequate ventilation as well as local exhaust at critical locations.

Protective and hygiene measures

Take off contaminated clothing and wash it before reuse.

Wash hands and face before breaks and after work and take a shower if necessary.

When using do not eat, drink, smoke, sniff. Keep away from food, drink and animal feedingstuffs.

Eye/face protection

During filling, metering, mixing and sampling must be used:

Wear eye/face protection. EN 166

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Recommended glove articles: EN ISO 374

Suitable material: NBR (Nitrile rubber); Butyl caoutchouc (butyl rubber)

Thickness of the glove material:

-NBR (Nitrile rubber): 0,4 mm

-Butyl caoutchouc (butyl rubber): 0,7mm

Breakthrough times and swelling properties of the material must be taken into consideration. Breakthrough time: > 8h

Skin protection

Wear suitable protective clothing. EN 14605

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Combination filtering device Typ: A-P2 (EN 14387)

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	blue-green
Odour:	characteristic
Odour threshold:	not determined

pH-Value:

7,1

Changes in the physical state

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	165 °C ASTM D 1120
solidification temperature::	< -18 °C DIN ISO 3016
Flash point:	> 126,5 °C DIN EN ISO 2719

Flammability

Solid/liquid:	not applicable
Gas:	not applicable

Explosive properties

The product is not: Explosive.

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Auto-ignition temperature:	> 440 °C DIN 51794
Decomposition temperature:	not determined

Oxidizing properties

The product is not: oxidising.

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Vapour pressure: (at 20 °C)	0,2 hPa
Density (at 20 °C):	1,122 g/cm ³ DIN 51757
Water solubility:	easily soluble
Solubility in other solvents not determined	
Partition coefficient n-octanol/water:	not determined
Viscosity / kinematic: (at 20 °C)	20 - 30 mm ² /s DIN 51562
Relative vapour density:	not determined
Evaporation rate:	not determined

9.2. Other information

Solid content:	not determined
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SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Avoid: Thermal decomposition

10.5. Incompatible materials

Materials to avoid:
- Oxidising agent

10.6. Hazardous decomposition products

Hazardous combustion products:
- Carbon monoxide (CO)
- Carbon dioxide (CO₂).
- Pyrolysis products, toxic

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Acute toxicity

Harmful if swallowed.

ATEmix calculated

ATE (oral) 500,0 mg/kg

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
107-21-1	Ethane-1,2-diol				
	oral	LD50 7712 mg/kg	Rat	Study report (1968)	according to BASF-internal standards
	dermal	LD50 > 3500 mg/kg	Mouse	Fundamental and Applied Toxicology 27: 1	LD50 derived from developmental toxicity
17265-14-4	Disodium sebacate				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1978)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1999)	OECD Guideline 402
19766-89-3	Sodium 2-ethylhexanoate				
	oral	LD50 2043 mg/kg	Rat	Study report (1987)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1986)	OECD Guideline 402
1330-43-4	disodium tetraborate, anhydrous				
	oral	LD50 > 2500 mg/kg	Rat	Study report (1996)	EU Method B.1
	dermal	LD50 > 2000 mg/kg	Rabbit	Study report (1985)	other: This study was carried out to com
	inhalation (4 h) dust/mist	LC50 > 2,04 mg/l	Rat	Study report (1994)	OECD Guideline 403

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

May damage fertility. May damage the unborn child. (disodium tetraborate, anhydrous)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure. (Ethane-1,2-diol)

Aspiration hazard

Based on available data, the classification criteria are not met.

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP]. Special hazards arising from the substance or mixture!

11.2. Information on other hazards

Endocrine disrupting properties

No information available.

SECTION 12: Ecological information

12.1. Toxicity

The product is not: Ecotoxic.

Safety Data Sheet

according to UK REACH Regulation

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
107-21-1	Ethane-1,2-diol					
	Acute fish toxicity	LC50 > 72860 mg/l	96 h	Pimephales promelas	Environ. Toxicology and Chemistry, Vol.	EPA 600/4-90/027. U.S. Environmental Pro
	Acute algae toxicity	ErC50 6500 - 13000 mg/l	96 h	Pseudokirchneriella subcapitata	Study report (1982)	other: EPA 600/9-78-018, 1978
	Acute crustacea toxicity	EC50 > 100 mg/l	48 h	Daphnia magna	Study report (1998)	OECD Guideline 202
	Fish toxicity	NOEC 15380 mg/l	7 d	Pimephales promelas	Environ. Toxicology and Chemistry, Vol.	other: EPA 600/4-89/001. U.S. Environmen
	Algae toxicity	NOEC > 100 mg/l	8 d	Scenedesmus quadricauda	REACH Registration Dossier	OECD Guideline 201
	Crustacea toxicity	NOEC 7500 - 15000 mg/l	21 d	Daphnia magna	REACH Registration Dossier	other: ASTM
17265-14-4	Disodium sebacate					
	Acute fish toxicity	LC50 > 100 mg/l	96 h	Danio rerio	REACH Registration Dossier	OECD Guideline 203
	Acute algae toxicity	ErC50 38,7 mg/l	72 h	Skeletonema costatum	REACH Registration Dossier	ISO 10253
	Acute crustacea toxicity	EC50 > 100 mg/l	48 h	Daphnia magna	REACH Registration Dossier	OECD Guideline 202
19766-89-3	Sodium 2-ethylhexanoate					
	Acute fish toxicity	LC50 > 100 mg/l	96 h	Oryzias latipes	NITE (National Institute of Technology a	OECD Guideline 203
	Acute algae toxicity	ErC50 49,3 mg/l	72 h	Desmodesmus subspicatus	Study report (1988)	other: Method: other: German Industrial
	Acute crustacea toxicity	EC50 85,4 mg/l	48 h	Daphnia magna	Study report (1988)	other: Directive 79/831/EEC, Annex V, Pa
	Crustacea toxicity	NOEC 25 mg/l	21 d	Daphnia magna	Study report (1997)	OECD Guideline 211
1330-43-4	disodium tetraborate, anhydrous					
	Acute fish toxicity	LC50 74 mg/l	96 h	Limanda limanda	REACH Registration Dossier	other: ASTM E729-95 Standard Guide for C
	Acute algae toxicity	ErC50 66 mg/l	72 h	Phaeodactylum tricornutum	REACH Registration Dossier	ISO 10253
	Acute crustacea toxicity	EC50 165 mg/l	48 h	Ceriodaphnia dubia	Study report (2010)	other: ASTM E729-95 Standard Guide for C

	Fish toxicity	NOEC mg/l	11,2	32 d	Pimephales promelas	REACH Registration Dossier	other: ASTM E1241-05 Standard Guide for
	Algae toxicity	NOEC mg/l	17,5	3 d	Pseudokirchneriella subcapitata	Study report (2000)	OECD Guideline 201
	Crustacea toxicity	NOEC mg/l	16,6	28 d	Americamysis bahia	REACH Registration Dossier	EPA OPPTS 850.1350
	Acute bacteria toxicity	(EC50 mg/l)	> 175	3 h	Activated sludge	Study report (2000)	OECD Guideline 209

12.2. Persistence and degradability

Elimination information: > 70 % DOC reduction (28 d) (OECD 301 A (new version)) Readily biodegradable.

12.3. Bioaccumulative potential

Does not accumulate in organisms.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
107-21-1	Ethane-1,2-diol	-1,36
17265-14-4	Disodium sebacate	-4,9
19766-89-3	Sodium 2-ethylhexanoate	1,3
1330-43-4	disodium tetraborate, anhydrous	-1,53

BCF

CAS No	Chemical name	BCF	Species	Source
1330-43-4	disodium tetraborate, anhydrous	0,7 - 1,4	Crassostrea gigas	REACH Registration D

12.4. Mobility in soil

Adsorption to solid soil phase is not expected.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

The product has not been tested.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information

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

EU regulatory information

Authorisations (REACH, annex XIV):

Substances of very high concern, SVHC (REACH, article 59):
disodium tetraborate, anhydrous

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 30, Entry 75

2010/75/EU (VOC): 93,47 % (1048,733 g/l)

2004/42/EC (VOC): 96,46 % (1082,281 g/l)

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,3,4,5,6,7,8,9,10,11,12,13,15,16.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds
SVHC: Substance of Very High Concern
For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Acute Tox. 4; H302	Calculation method
Repr. 1B; H360FD	Calculation method
STOT RE 2; H373	Calculation method

Relevant H and EUH statements (number and full text)

H302 Harmful if swallowed.
H319 Causes serious eye irritation.

H360FD	May damage fertility. May damage the unborn child.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)