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

· **1.1 Product identifier**

· **Product name: Phenole No. 2**

· _SDS valid from Lot: AA3A0329

· **Catalog number:** 00515961, 00515969BT, 00515960BT, 515960BT

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

· **Application of the substance / the preparation:** Reagent for water analysis

· **1.3 Details of the supplier of the safety data sheet**

· **Supplier:**
Tintometer GmbH
Schleefstraße 8-12
44287 Dortmund
Made in Germany
www.lovibond.com
phone: +49 (0)231 94510-0
e-mail: sales@lovibond.com

The Tintometer Limited
Lovibond® House
Sun Rise Way
Amesbury
Wiltshire SP4 7GR
United Kingdom
phone : +44 1980 664800
e-mail: SDS@lovibond.uk

· **Informing department:**
e-mail: sds@lovibond.com
Product Safety Department

· **1.4 Emergency telephone number:**
+44 1235 239670
Languages: English

*
SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

GHS08 health hazard

Repr. 1B H360FD May damage fertility. May damage the unborn child.

GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.

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· **Hazard pictograms**

GHS07 GHS08

· **Signal word** Danger
· **Hazard-determining components of labelling:**
boric acid
· **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H360FD May damage fertility. May damage the unborn child.
· **Precautionary statements**
P280 Wear protective gloves/protective clothing/eye protection.
P201 Obtain special instructions before use.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P302+P352 IF ON SKIN: Wash with plenty of water.
P405 Store locked up.
· **Additional information:**
EUH032 Contact with acids liberates very toxic gas.
Restricted to professional users.

· **2.3 Other hazards** No further relevant information available.

· **Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
· **Determination of endocrine-disrupting properties**
The product does not contain substances with endocrine disrupting properties.

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SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of organic and inorganic compounds

· **Dangerous components:**		
CAS: 10043-35-3 EINECS: 233-139-2 Index No: 005-007-00-2 Reg.nr.: 01-2119486683-25-XXXX	boric acid Repr. 1B, H360FD	40–50%
CAS: 13746-66-2 EINECS: 237-323-3	tripotassium hexacyanoferrate Aquatic Chronic 2, H411; Eye Irrit. 2, H319, EUH032	0.25–<2.5%
CAS: 1310-65-2 EINECS: 215-183-4 Reg.nr.: 01-2119560576-31-XXXX	lithium hydroxide Skin Corr. 1A, H314; Eye Dam. 1, H318; Acute Tox. 4, H302 ATE: LD50 oral: 330 mg/kg	1–≤2.5%

· **SVHC**	
CAS: 10043-35-3	boric acid

· **SVHC (UK)**	
CAS: 10043-35-3	boric acid

· **Additional information** For the wording of the listed hazard phrases refer to section 16.

*
SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information** Instantly remove any clothing soiled by the product.
· **After inhalation**
Supply fresh air.
Get medical advice/attention.

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· **After skin contact**
Instantly wash with water and soap and rinse thoroughly.
Get medical advice/attention.
· **After eye contact** Rinse opened eye for several minutes (at least 15 min) under running water. Then consult doctor.
· **After swallowing**
Rinse out mouth and then drink 1-2 glasses of water.
Seek medical treatment.
· **4.2 Most important symptoms and effects, both acute and delayed:**
irritations
after inhalation:
mucosal irritations, cough, shortness of breath
after swallowing:
absorption
sickness
vomiting
cardiovascular disorders
after absorption of large amounts:
fatigue
diarrhoea
cramps
drop in temperature
CNS disorders
ataxia (impaired locomotor coordination)
· **Danger** Danger of disturbed cardiac rhythm.
· **4.3 Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

* SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
· **5.2 Special hazards arising from the substance or mixture**
The product is not combustible.
Formation of toxic gases is possible during heating or in case of fire.
Can be released in case of fire:
hydrogen cyanide (prussic acid HCN)
Hydrogen chloride (HCl)
Dipotassium oxide
LiOx
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
· **Additional information**
Collect contaminated fire fighting water separately. It must not enter drains.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.

* SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
· **Advice for non-emergency personnel:**
Wear protective equipment. Keep unprotected persons away.
Avoid substance contact.
Ensure adequate ventilation
· **Advice for emergency responders:**
Put on breathing apparatus.
Protective equipment: see section 8

· **6.2 Environmental precautions:** Do not allow product to reach sewage system or water bodies.
· **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Collect mechanically.
Dispose of contaminated material as waste according to item 13.

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· **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

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SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
· **Advice on safe handling:** Ensure good ventilation/exhaustion at the workplace.
· **Hygiene measures:**
Do not get in eyes, on skin, or on clothing.
Take off immediately all contaminated clothing.
Store protective clothing separately.
Wash hands during breaks and at the end of the work.
Do not eat, drink or smoke when using this product.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Requirements to be met by storerooms and containers:**
Store in cool location.
Unsuitable material for container: metals, metal alloys
· **Information about storage in one common storage facility:**
Do not store together with acids.
see chapter 10
· **Further information about storage conditions:**
Store in a locked cabinet or with access restricted to technical experts or their assistants.
Store in cool, dry conditions in well sealed containers.
Protect from heat and direct sunlight.
Protect from the effects of light.
Protect from humidity and keep away from water.
This product is hygroscopic.
· **Recommended storage temperature:** 20°C +/- 5°C

· **7.3 Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
CAS: 13746-66-2 tripotassium hexacyanoferrate	
WEL (Great Britain)	Long-term value: 5 mg/m³ as CN; Sk
CAS: 1310-65-2 lithium hydroxide	
WEL (Great Britain)	Short-term value: 1 mg/m³

· **Regulatory information** WEL (Great Britain): EH40/2020

· **DNELs**
Derived No Effect Level (DNEL)

CAS: 10043-35-3 boric acid		
Oral	DNEL	0.98 mg/kg (Consumer / acute / systemic effects)
		0.98 mg/kg (Consumer / long-term / systemic effects)
Dermal	DNEL	392 mg/kg (Worker / long-term /systemic effects)
		196 mg/kg (Consumer / long-term / systemic effects)
Inhalative	DNEL	8.3 mg/m³ (Worker / long-term /systemic effects)
		4.15 mg/m³ (Consumer / long-term / systemic effects)
CAS: 13746-66-2 tripotassium hexacyanoferrate		
Dermal	DNEL	9 mg/kg //d (Worker / long-term /systemic effects)
CAS: 1310-65-2 lithium hydroxide		
Oral	DNEL	12.4 mg/kg /bw/d (Consumer / acute / systemic effects)
		4.13 mg/kg /bw/d (Consumer / long-term / systemic effects)
Dermal	DNEL	100 mg/kg /bw/d (Worker / acute / systemic effects)

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Inhalative	DNEL	41.35 mg/kg /bw/d (Worker / long-term /systemic effects) 50 mg/kg /bw/d (Consumer / acute / systemic effects) 41.35 mg/kg /bw/d (Consumer / long-term / systemic effects) 30 mg/m³ (Worker / acute / systemic effects) 10 mg/m³ (Worker / long-term /systemic effects) 18.63 mg/m³ (Consumer / acute / systemic effects) 6.21 mg/m³ (Consumer / long-term / systemic effects)

· **Recommended monitoring procedures:**
Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

· **PNECs**
Predicted No Effect Concentration (PNEC)

CAS: 10043-35-3 boric acid	
PNEC	10 mg/l (Sewage treatment plant) 2.02 mg/l (Marine water) 13.7 mg/l (Aquatic intermittent release) 2.02 mg/l (Fresh water)
PNEC	5.4 mg/kg (Soil)
CAS: 13746-66-2 tripotassium hexacyanoferrate	
PNEC	100 mg/l (Sewage treatment plant) 0.00017 mg/l (Marine water) 0.0017 mg/l (Fresh water)
CAS: 1310-65-2 lithium hydroxide	
PNEC	79.2 mg/l (Sewage treatment plant) 0.23 mg/l (Marine water) 2.3 mg/l (Fresh water)
PNEC	0.45 mg/kg (Soil) 0.9 mg/kg (Marine sediment) 9 mg/kg (Fresh water sediment)

· **Additional information:** The lists that were valid during the compilation were used as basis.

· **8.2 Exposure controls**

· **Engineering measures:**
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
See item 7.

· **Individual protection measures, such as personal protective equipment**
· **Eye/face protection**
Safety glasses
Use safety glasses that have been tested and approved in accordance with government standards such as EN 166.
· **Hand protection**
Protective gloves.
After use of gloves apply skin-cleaning agents and skin cosmetics.
· **Material of gloves**
nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
· **Penetration time of glove material**
Value for the permeation: Level = 1 (< 10 min)
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Other skin protection (body protection):** Protective work clothing.
· **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
· **Recommended filter device for short term use:** Filter P3

· **Environmental exposure controls** Do not allow product to reach sewage system or water bodies.

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **Physical state**	Solid.
· **Form:**	Tablets
· **Colour:**	Beige
· **Odour:**	Nearly odourless
· **Odour threshold:**	Not determined.
· **Melting point/Freezing point:**	Not determined.
· **Boiling point or initial boiling point and boiling range**	Not determined.
· **Flammability**	The product is not combustible.
· **Explosive properties:**	Product is not explosive.
· **Lower and upper explosion limit**	
Lower:	Not applicable.
Upper:	Not applicable.
· **Flash point:**	Not applicable.
· **Auto-ignition temperature:**	Not applicable (solid).
· **Decomposition temperature:**	Not determined.
· **pH (11 g/l) at 20°C**	8.1
· **Kinematic viscosity**	Not applicable (solid).
· **Solubility**	
· **Water:**	Soluble
· **Partition coefficient n-octanol/water (log value)**	Not determined.
· **Vapour pressure:**	Not applicable.
· **Density and/or relative density**	
· **Density:**	Not determined.
· **Relative density:**	Not determined.
· **Relative gas density**	Not applicable (solid).
· **Particle characteristics**	Not determined.

· **9.2 Other information**

· **Information with regard to physical hazard classes**	
· **Corrosive to metals**	Void
· **Other safety characteristics**	
· **Oxidising properties:**	none
· **Additional information**	
· **Solids content:**	100 %

*
SECTION 10: Stability and reactivity

· **10.1 Reactivity** see section 10.3
· **10.2 Chemical stability**
Stable at ambient temperature (room temperature).
sensitivity to light
· **10.3 Possibility of hazardous reactions**
Aqueous solution reacts alkaline.
Aqueous solution reacts with metals.
Reacts with acids releasing Hydrogen cyanide (prussic acid).
Reacts with light alloys in the presence of moisture to form hydrogen
Reacts with alkali (lyes)
Reacts with oxidizing agents
--> forms heat
· **10.4 Conditions to avoid**
To avoid thermal decomposition do not overheat.
Exposure to moisture.
Exposure to light
· **10.5 Incompatible materials:**
metals
light metals
organic substances
· **10.6 Hazardous decomposition products:** see section 5

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SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values that are relevant for classification:**		
CAS: 10043-35-3 boric acid		
Oral	LD50	2660 mg/kg (rat) (OECD 401) (GESTIS, ECHA registrant)
Dermal	LD50.	>2000 mg/kg (rat) (ECHA, registrant: no deaths occurred.)
	LD_0	1500 mg/kg (child) (MERCK)
	NOAEL	9.6 mg/kg (rat) (NTP)
CAS: 13746-66-2 tripotassium hexacyanoferrate		
Oral	LD50	>5110 mg/kg (rat) (ECHA)
Dermal	LD50.	>2000 mg/kg (rat) (ECHA)
CAS: 1310-65-2 lithium hydroxide		
Oral	LD50	330 mg/kg (ATE) (Registrant, ECHA) Acute toxicity data are available for oral route of exposure: LD50 (rat, oral): female: 210 mg/kg bw; male: 280 mg/kg bw , both for lithium hydroxide anhydrous. As these values are most likely linked to local tissue damage due to the corrosiveness of the substance and are not only a result of "primary" systemic toxicity the LD50 oral of lithium chloride and lithium carbonate were taken into account after conversion. A LD50 value of 330 mg/kg bw were found to reflect properly the systemic toxicity of the corrosive substance lithium hydroxide anhydrous.
Dermal	LD50.	>2000 mg/kg /bw (rat) (Registrant, ECHA)
Inhalative	LC50	>3.4 mg/l /4h (rat) (Registrant, ECHA)
	NOAEL	13.9–84.8 mg/kg /bw/d (rat) (Registrant, ECHA: oral)

· **Skin corrosion/irritation** Causes skin irritation.

· **Serious eye damage/irritation** Causes serious eye irritation.

· **Information on components:**		
CAS: 10043-35-3 boric acid		
Irritation of skin	OECD 404	(rabbit: no irritation) (Registrant, ECHA)
Irritation of eyes	OECD 492	(rabbit: slight irritation) (IUCLID)

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

· **Information on components:**		
CAS: 10043-35-3 boric acid		
Sensitisation	OECD 406	(guinea pig: negative)

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

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

· **Reproductive toxicity** May damage fertility. May damage the unborn child.

· **Information on components:**
OECD 414: Teratogenicity testing
OECD 473: Mutagenicity testing
OECD 471, 474, 476, 487: Germ cell mutagenicity testing

CAS: 10043-35-3 boric acid	
OECD 471	(negative) (Bacterial Reverse Mutation Test - Ames test)

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OECD 476	(negative) (In Vitro Mammalian Cell Gene Mutation Test) (mouse lymphomea test)
OECD 414	(negative) (oral, rat) (ECHA, registrant: no evidence of developmental toxicity up to 55 mg/kg bw. At 76 mg/kg bw there was reduced fetal bodyweight, short and wavy ribs, and these effects disappeared during the postnatal period.)
OECD 474	(negative) (in vivo, mice)

· **STOT (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.
· **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

· **Information on likely routes of exposure**
"Under occupational conditions, the main intake pathway for boric acid (CAS 10043-35-3) proceeds via the respiratory tract. Furthermore, the uptake of the solid or its concentrated solutions should be expected following contact with damaged or inflamed skin." (GESTIS)

· **Additional toxicological information:**
The following applies to soluble iron compounds: nausea and vomiting after swallowing. The absorption of large quantities is followed by cardiovascular disorders. Toxic effect on liver and kidneys.
The following applies to lithium compounds in general:
after absorption: CNS disorders, ataxia (impaired locomotor coordination) due to disturbed electrolyte balance
CAS 10043-35-3: Absorption through gastro-intestinal tract, mucous membranes

CAS: 10043-35-3 boric acid
. (source: GESTIS) Main toxic effects: Acute: Slightly irritating to the eyes and skin; gastrointestinal disturbances, CNS-effects and (later) skin damage after massive poisoning Chronic: Irritation to the mucous membranes following inhalative exposure, effects to the gastrointestinal tract and CNS Further Information (Merck): "Toxicity reported for borates in humans: ingestion or absorption may cause nausea, vomiting, diarrhea, abdominal cramps, anderythematous lesions on the skin and mucous membranes. Other symptoms include: circulatory collapse, tachycardia, cyanosis, delirium, convulsions, and coma. Death has been reported to occur in infants from less than 5 grams and in adults from 5 to 20 grams." "Liver - Irregularities - Based on Human Evidence"

· **11.2 Information on other hazards**
· **Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.

· **Other information**
According to the information available to us, the chemical, physical and toxicological properties of the substances mentioned in Chapter 3 have not been thoroughly investigated.

*
SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
CAS: 10043-35-3 boric acid	
EC50	133 mg/l/48h (Daphnia magna) (ECOTOX)
LC50	50–100 mg/l/96h (rainbow trout) (ECOTOX)
CAS: 13746-66-2 tripotassium hexacyanoferrate	
EC50	59 mg/l/48h /OECD 202 (Daphnia magna) (ECHA)
NOEC	0.67 mg/l/72h /OECD 201 (Pseudokirchneriella subcapitata) (ECHA)
EC50	1.7 mg/l/72h (Pseudokirchneriella subcapitata) (OECD 201) (ECHA)
LC50	>100 mg/l/96h (carp) (ECHA)

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CAS: 1310-65-2 lithium hydroxide	
EC50	19.1 mg/l/48h (Daphnia magna) without pH-adjustment
NOEC	5.71 mg/l/72h (Pseudokirchneriella subcapitata)
NOEC	9.9 mg/l /34d (zebrafish)
	2.3 mg/l /21d (Daphnia magna)
EC50	87.57 mg/l/72h (Pseudokirchneriella subcapitata)
LC50	62.2 mg/l/96h (zebrafish)

· **Other information:**
The following applies for lithium compounds in general:
fish toxic from 100 mg/l, Daphnia toxic from 16 mg/l, plants toxic from 0,2 mg/l

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential**
Pow = n-octanol/wasser partition coefficient
log Pow < 1 = Does not accumulate in organisms.

CAS: 10043-35-3 boric acid	
log Pow	-1.09 (.) (OECD 107, 22°C) (Merck)

· **12.4 Mobility in soil** No further relevant information available.

· **12.5 Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

· **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.

· **12.7 Other adverse effects** Avoid transfer into the environment.

· **Water hazard:**
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.

*
SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Hand over to disposers of hazardous waste.

· European waste catalogue	
16 05 06*	laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

*
SECTION 14: Transport information

· **14.1 UN number or ID number**	
· **ADR, IMDG, IATA**	Void
· **14.2 UN proper shipping name**	
· **ADR, IMDG, IATA**	Void
· **14.3 Transport hazard class(es)**	
· **ADR, IMDG, IATA**	
· **Class**	Void
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	Void
· **14.5 Environmental hazards:**	Not applicable.
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.

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· **Transport/Additional information:** Not dangerous according to the above specifications.

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SECTION 15: Regulatory information

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

· **Poisons Act UK**

· **Regulated explosives precursors**
None of the ingredients is listed.

· **Regulated poisons**
None of the ingredients is listed.

· **Reportable explosives precursors**
None of the ingredients is listed.

· **Reportable poisons**
None of the ingredients is listed.

· **Regulation (EU) 2019/1148 on the marketing and use of explosives precursors** not regulated

· **Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)**
None of the ingredients is listed.

· **Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:**
None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**
None of the ingredients is listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**
None of the ingredients is listed.

· **Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:**
None of the ingredients is listed.

· **REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)**
None of the ingredients is listed.

· **LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)**
None of the ingredients is listed.

· **Substances of very high concern (SVHC) according to REACH, Article 57** see item 3 SVHC
· **Substances of very high concern (SVHC) according to UK REACH** see item 3 SVHC

· **Directive 2012/18/EU (SEVESO III):**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 30

· **Information about limitation of use:**
Employment restrictions concerning young persons must be observed (94/33/EC).
Employment restrictions concerning pregnant and lactating women must be observed (92/85/EEC).

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

*
SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Training hints** Provide adequate information, instruction and training for operators.

· **Relevant phrases**
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.

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H360FD May damage fertility. May damage the unborn child.
H411 Toxic to aquatic life with long lasting effects.
EUH032 Contact with acids liberates very toxic gas.

· **Abbreviations and acronyms:**
OECD: Organisation for Economic Co-operation and Development
STOT: specific target organ toxicity
SE: single exposure
RE: repeated exposure
EC50: half maximal effective concentration
IC50: half maximal inhibitory concentration
NOEL or NOEC: No Observed Effect Level or Concentration
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised 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 (division of the American Chemical Society)
DNEL: Derived No-Effect Level (UK REACH)
PNEC: Predicted No-Effect Concentration (UK REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
ATE: Acute toxicity estimate values
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Repr. 1B: Reproductive toxicity – Category 1B
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

· **Sources**
Data arise from safety data sheets, reference works and literature.
ECHA: European CHemicals Agency http://echa.europa.eu
ECOTOX Database
GESTIS- Stoffdatenbank (Substance Database, Germany)
IUCLID (International Uniform Chemical Information Database)
NTP (National Toxicology Program)

· *** Data compared to the previous version altered.**