Technical Data Sheet

PROMEX™ Na20S

Broad spectrum preservative

PROMEX™ Na20S is a glycolic solution of 20% 1,2-Benzisothiazolin-3-one
frost stable to -5˚C

Key features

- used as a preservative of aqueous and water miscible chemicals and technical products
- broad antimicrobial efficacy against bacteria, yeasts and fungi
- often effective where other preservatives fail, especially at critical temperature and pH-values
- free from formaldehyde, formaldehyde releasers, phenolics, heavy metals, halogens
- non-volatile
- excellent thermal stability (-5° - 120°C)
- excellent chemical stability
- excellent long term efficacy
- good compatibility with other raw materials

Characteristic properties

- glycolic, yellowish solution
- odourless at use levels
- density at 20°C: ca. 1.1 kg/l
- pH (0.1%): ca. 9 - 10
- soluble in water
- compatible with non-ionic and anionic surfactants

PROMEX™ Na20S meets the highest purity requirements. Technically generated impurities are often the cause of undesired side effects in terms of toxicological or technical properties. These impurities are reduced to a minimum in **PROMEX™ Na20S**.

PROMEX™ Na20S penetrates the cells of microorganisms, reacts with vital parts of the cells and inactivates important substrates and enzymes necessary to normal cell function. These relatively unspecific reactions exhibit a bactericidal effect and minimise adaptation or the development of microbial resistance.

PROMEX™ Na20S prevents microbial deterioration of products and resulting consequences such as:

- phase separation
- odour build-up
- gas build-up
- changes in viscosity
- build-up of health threatening toxins

Microbial efficacy

Bacteria	MIC (ppm)	Fungi and yeasts	MIC (ppm)
Pseudomonas aeruginosa	250	*Aspergillus niger*	350
Pseudomonas putida	250	*Chaetomium globosum*	400
Escherichia coli	40	*Penicillium notatum*	125
Enterobacter cloacae	80	*Saccharomyces cerevisiae*	250
Staphylococcus aureus	40	*Rhodotorola rubra*	500
Streptococcus lactis	15	*Candida albicans*	100
Streptococcus faecalis	40	*Endomycopsis albicans*	250

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Applications

PROMEX™ Na20S is highly suitable for the preservation of a magnitude of aqueous formulations due to its good thermal and chemical stability.

It shows highest efficacy in a wide pH range of pH 4 – 12 and is chemically stable from pH 2 – 12.

Experience shows that compatibility with most products and raw materials is excellent, although compatibility testing is recommended for special formulations.

Application areas

- paints
- polymer emulsions
- adhesives
- metal working fluids
- household cleaners
- printing inks
- starches
- fount solutions
- dispersions

Ecological effects (BIT)

Biodegradable. Permanent dosing with 10 ppm a.i. shows no negative effect on aerobic oxidation with activated sludge. For anaerobic degradation this level is 2 ppm. BIT has low bioaccumulation potential: Log $P_{oct/w}$ = 1.11 .

Toxicological effects (BIT)

Refer to SDS

Regulatory approvals (Na20S)

USEPA Registration No. 80285-2 (as PROMEX™ 20S)
CDPR (California) Registration No. 80285-2-AA
Istituto Superiore di Sanità (ISS) (Italy) Company Code No. 3497368; Product Code AUT-1
BAuA Reg.-Nr. PT 2 - N-32259; PT 6 - N-32258; PT 12 - N-31842

Regulatory approvals (BIT)

USEPA Registration. No. 707-310-73930

Germany: Database BfR Recommendations on Food Contact Materials (formerly "Plastics Recommendations" / BgVV)

ID 140: XIV. Plastics Dispersions; Substances which protect the dispersion against putrefaction: 1,2-Benzisothiazolin-3-one. No more than 80 µg/dm^2 of this substance may be present in the dispersion film.

ID 210: XXI. Commodities based on Natural and Synthetic Rubber; Anti-fouling agents: 1,2-Benzisothiazolin-3-one, max. 0.02 % (in total max. 0.4 % based on the latex)

ID 360: XXXVI. Paper and board for food contact; VII. Slimicides: 1,2-Benzisothiazolin-3-one. No more than 10 µg/dm^2 of this substance must be detectable in the extract of the finished product; **VIII. Preservatives:** 1,2-Benzisothiazolin-3-one. No more than 10 µg/dm^2 of this substance must be detectable in the extract of the finished product

ID 361: XXXVI/1. Cooking Papers, Hot Filter Papers and Filter Layers; Slimicides: 1,2-Benzisothiazolin-3-one (detection limit of analysis method 10 µg/dm²)

ID 362: XXXVI/2. Paper and Paperboard for Baking Purposes; Slimicides: 1,2-Benzisothiazolin-3-one. No more than 10 µg/dm² must be detectable in the hot water extract from the finished product. (In the extracts of the final products the following levels must not be exceeded in total: 1,2-Benzisothiazolin-3-one: 80 µg/dm^2)

ID 363: XXXVI/3. Absorber pads based on cellulosic fibres for food packaging; Slimicides: 1,2-Benzisothiazolin-3-one (not detectable in cold water extract, detection limit of analysis method 10 µg/dm²)

United States FDA Regulations 21 CFR:
PART 175 – Indirect food additives; Adhesive and Components of Coatings:
175.105 "Adhesives (for indirect food contact)" 1,2-Benzisothiazolin-3-one (CAS No. 2634-33-5) For use as preservative only.

PART 176 – Indirect food additives; Paper and Paperboard Components:
176.170 paper & paperboard in contact with aqueous & fatty foods: 1,2-Benzisothiazolin-3-one (CAS No. 2634-33-5) For use only as a preservative in paper coating compositions and limited to use at a level not to exceed 0.01 mg/in^2 (0.0016 mg/cm^2) of the finished paper and paperboard.

176.180 paper & paperboard in contact with dry food: 1,2-Benzisothiazolin-3-one (CAS No. 2634-33-5) For use only as a preservative in paper coating compositions and limited to use at a level not to exceed 0.02 mg/in^2 (0.0031 mg/cm^2) of finished paper and paperboard.

176.300 Slimicides in paper and paperboard: 1,2-Benzisothiazolin-3-one (CAS No. 2634-33-5) At a level of 0.06 pound per ton of dry weight fiber.

PART 177 – Indirect food additives; Polymers
177.2600 Rubber articles intended for repeated use: 1,2-Benzisothiazolin-3-one (CAS No. 2634-33-5) for use as a biocide in uncured liquid rubber latex not to exceed 0.02 percent by weight of the latex solids, where the total of all items listed in paragraph (c)(4)(ix) of this section does not exceed 5 percent of the rubber product.

Food Contact Substance Notification (FCN) 1208
Food Contact Substance (FCS): 1,2-Benzisothiazolin-3-one (CAS No. 2634-33-5).
Notifier: Prom Chem Limited / Manufacturer/Supplier: Prom Chem Limited
Intended Use: For use as a biocide in uncured liquid rubber latex solutions used to manufacture repeat-use rubber gloves. (177.2600)
Limitations/Specifications: The FCS may be used at a level not to exceed 0.05 weight percent of the latex on a solids basis. The finished glove may be used in contact with all food types.

FDA 40 CFR: 180.920 (formerly FDA 40 CFR 180.1001(d))
Ingredients in pesticide formulations (exempted from the requirement of a tolerance when used in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to growing crops only. As a preservative (not more than 0.1% of formulation. Not more than 0.02 lb to be applied per acre).

Literature

- Wallhäußer, *Praxis der Sterilisation Desinfektion Konservierung*, 5. Auflage (1995) ISBN 3-13-416305-5

- Schnuch, A., Geier, J., Uter, W., Frosch, P.J.: Patch testing with preservatives, antimicrobials, and industrial biocides. Results from a multicentre study. *British Journal of Dermatology* 138, 467-476 (1998)

Shelf life & Storage Conditions

Minimum of 24 months from the production date. Protect from frost, heat and direct sunlight.
Possibility of reversible formation of crystals at temperature <0^{o}C over the long exposure, after warming up and stirring the product can be used again.

Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2020/878

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

1.1. Product identifier

Article No. (manufacturer/supplier): RPC001
Trade name/designation: PROMEX Na20S
UFI: AG10-S0H4-P00V-2SQF

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

Relevant identified uses
Preservative
Industrial use; Professional use

1.3. Details of the supplier of the safety data sheet

Manufacturer
Vink Chemicals GmbH & Co. KG
Eichenhöhe 29
D-21255 Kakenstorf
Germany
Telephone: +49 (0) 4186 - 88797 0

Department responsible for information:
Mr. Branko Ulaga
E-mail (competent person)
+49 (0) 4186 - 88797 0
sds@vink-chemicals.com

importer
Vink Chemicals UK Ltd.
25 Clinton Place, Seaford
BN25 1NP
United Kingdom

Department responsible for information:
Mr. Branko Ulaga
E-mail (competent person):
+49 (0) 4186 - 88797 0
sds@vink-chemicals.com

1.4. Emergency telephone number

National Poisons Information Service: 0844 892 0111

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture *

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

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

Met. Corr. 1 / H290	Corrosive to metals	May be corrosive to metals.
Skin Corr. 1A / H314	Skin corrosion/irritation	Causes severe skin burns and eye damage.
Eye Dam. 1 / H318	Serious eye damage/eye irritation	Causes serious eye damage.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
Aquatic Chronic 2 / H411	Hazardous to the aquatic environment	Toxic to aquatic life with long lasting effects.

2.2. Label elements *

The product is classified and labelled according to EC directives or corresponding national laws.

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

Hazard pictograms

Danger

Hazard statements

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P260	Do not breathe vapour.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye/face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/ physician.
P391	Collect spillage.

Hazard components for labelling

sodium hydroxide
1,2-benzisothiazol-3(2H)-one

Supplemental hazard information

not applicable

2.3. **Other hazards**

Contains no endocrine disruptor (EDC) at a concentration of >= 0.1 %
Does not contain a PBT/vPvB substance in a concentration of >= 0.1 %

SECTION 3: Composition/information on ingredients

3.2. **Mixtures** *

Description Biocide

Hazardous ingredients

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

EC No. CAS No. Index No.	REACH No. Designation classification: // Remark	weight-%
220-120-9 2634-33-5 613-088-00-6	1,2-benzisothiazol-3(2H)-one Acute Tox. 4 H302 / Skin Irrit. 2 H315 / Eye Dam. 1 H318 / Skin Sens. 1 H317 / Aquatic Acute 1 H400 / Aquatic Chronic 1 H410 Specific concentration limit (SCL): Skin Sens. 1 H317 >= 0,05 Acute toxicity estimate (ATE): ATE (oral): 670 mg/kg bw	15,5 - 20
215-185-5 1310-73-2 011-002-00-6	sodium hydroxide Skin Corr. 1A H314 / Eye Dam. 1 H318 / Met. Corr. 1 H290 Specific concentration limit (SCL): Skin Corr. 1A H314 >= 5 / Skin Corr. 1B H314 >= 2 / Skin Irrit. 2 H315 >= 0,5 / Eye Irrit. 2 H319 >= 0,5	3,5 - 5,5

Additional information

Full text of classification: see section 16

SECTION 4: First aid measures

4.1. **Description of first aid measures**

General information

In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.

In case of inhalation

Remove casualty to fresh air and keep warm and at rest. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners. Consult a physician.

After eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing.Immediately call a doctor.

Following ingestion

If swallowed, rinse mouth with water (only if the person is conscious). Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting.Seek medical advice immediately.

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

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

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

First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1. **Extinguishing media**

Suitable extinguishing media
alcohol resistant foam, carbon dioxide, Powder, spray mist, (water)

Unsuitable extinguishing media
strong water jet

5.2. **Special hazards arising from the substance or mixture**
Do not breathe gas/fumes/vapour/spray.

5.3. **Advice for firefighters**
Provide a conveniently located respiratory protective device.

Additional information
Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

SECTION 6: Accidental release measures

6.1. **Personal precautions, protective equipment and emergency procedures**
Ventilate affected area. Do not breathe vapours.

6.2. **Environmental precautions**
Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

6.3. **Methods and material for containment and cleaning up**
Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13).

6.4. **Reference to other sections**
Observe protective provisions (see section 7 and 8).

SECTION 7: Handling and storage

7.1. **Precautions for safe handling**

Advices on safe handling

Use only with sufficient ventilation.Refer to chapter 8. : Exposure controls / Personal protection

Further information
Respiratory protection necessary at: aerosol or mist formation

7.2. **Conditions for safe storage, including any incompatibilities**

Technical measures and storage conditions
Keep/Store only in original container.

Requirements for storage rooms and vessels
Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO).

Further information on storage conditions
Take care of instructions on label. Protect from heat and direct sunlight. Protect from frost.

7.3. **Specific end use(s)**
No measures required.

SECTION 8: Exposure controls/personal protection

8.1. **Control parameters** *
Occupational exposure limit values

sodium hydroxide
Index No. 011-002-00-6 / EC No. 215-185-5 / CAS No. 1310-73-2

STEL: 2 mg/m3

Additional information
TWA : Long-term occupational exposure limit value
STEL : short-term occupational exposure limit value

Ceiling : peak limitation

8.2. **Exposure controls**

Personal protection equipment

Respiratory protection

Respiratory protection necessary at: exceeding exposure limit values. Use only respiratory protection equipment with CE-symbol including four digit test number. Combination filtering device Filter type: ABEK

Hand protection

Wear protective gloves. Recommended glove articles according EN ISO 374. Recommendation for protection against the commonly occurring ingredients in the products: For short-term contact (e.g. splash guard): Suitable material: Nitriles, Butyl caoutchouc (butyl rubber), material thickness: >= 0,4 mm, Penetration time of glove material depending on intensity and duration of exposure to skin: >= 480 min. The exact break through time can be found out by the manufacturer of the protective gloves and has to be observed. The protective gloves should always be checked for their suitability for specific workplaces (e.g. mechanical resistance, product compatibility). Follow the glove manufacturer's instructions and information on how to use, store, care for and replace gloves. The protective gloves should be replaced immediately if they are damaged or the first signs of wear and tear.

Eye/face protection

Wear eye glasses with side protection according to EN 166.

Body protection

Suitable protective clothing: Protective clothing. Type 6 DIN EN 13034

Protective measures

Avoid contact with eyes and skin.

Environmental exposure controls

Do not allow to enter into surface water or drains. See section 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

9.1. **Information on basic physical and chemical properties** *

Physical state:	**Liquid**
Appearance:	**glycolic solution**
Colour:	**light yellow**
Odour:	**characteristic**
Odour threshold:	**not relevant**
Melting point/freezing point	**< 20 °C**
Initial boiling point and boiling range:	**111 °C** Method: OECD 103
Flammability:	**Combustible liquid.**
Lower and upper explosion limit:	
Lower explosion limit:	**2,9 Vol-%**
Upper explosion limit:	**12,6 Vol-%**
Flash point:	**> 120 °C** Method: EEC A 09
Auto-ignition temperature:	**332 °C**
Decomposition temperature:	**not determined**
pH at 20 °C:	**10 - 13,5 / 10,0 weight-%**
Cinematic viscosity (40°C):	**91,88 mm²/s**
Viscosity at 25 °C:	**104,5 mPa* s** Method: OECD 114
Solubility(ies):	
Water solubility at 20 °C:	**805**
Partition coefficient: n-octanol/water:	**see section 12**
Vapour pressure at 20 °C:	**not determined**
Density and/or relative density:	

Density at 20 °C:	**1,137 g/cm³**
Relative vapour density:	**not determined**
particle characteristics:	**not applicable**

9.2. **Other information**

No further relevant information available.

SECTION 10: Stability and reactivity

10.1. **Reactivity**
No information available.

10.2. **Chemical stability**
Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.

10.3. **Possibility of hazardous reactions**
No known hazardous reactions.

10.4. **Conditions to avoid**
Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7. Hazardous decomposition byproducts may form with exposure to high temperatures.

10.5. **Incompatible materials**
Reducing agent, Oxidising agent.

10.6. **Hazardous decomposition products**
Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: Nitrogen oxides (NOx) Carbon monoxide (CO) Sulfur dioxide, Hydrogen chloride (HCl)

SECTION 11: Toxicological information

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

Acute toxicity

1,2-benzisothiazol-3(2H)-one
oral, LD50, Rat: 670 mg/kg

Oxydipropanol
oral, LD50, Rat: > 5000 mg/kg

Skin corrosion/irritation; Serious eye damage/eye irritation

Corrosive

Causes severe skin burns and eye damage.

Respiratory or skin sensitisation

sensitising

May cause an allergic skin reaction.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

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

STOT-single exposure; STOT-repeated exposure

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

Aspiration hazard

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

Practical experience/human evidence

Overall assessment on CMR properties

The ingredients in this mixture do not meet the criteria for classification as CMR category 1A or 1B according to CLP.

11.2. **Information on other hazards**

Endocrine disrupting properties
No further information is available.

SECTION 12: Ecological information

Classification according to Regulation (EC) No 1272/2008 [CLP]
Do not allow to enter into surface water or drains.

12.1. **Toxicity** *

1,2-benzisothiazol-3(2H)-one
Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 1,5 mg/L (96 h)
Daphnia toxicity, EC50, Daphnia magna (Big water flea): 0,99 mg/L (48 h)
Algae toxicity, ErC50: 0,108 mg/L

sodium hydroxide
Fish toxicity, LC50: 125 mg/L (96 h)
Daphnia toxicity, EC50: 40,4 mg/L (48 h)

Long-term Ecotoxicity

Toxic to aquatic life with long lasting effects.

1,2-benzisothiazol-3(2H)-one
Fish toxicity, LC50: 0,21 mg/L (96 h)
Daphnia toxicity, EC50: 0,91 mg/L (48 h)

12.2. **Persistence and degradability**
Toxicological data are not available.

12.3. **Bioaccumulative potential** *

1,2-benzisothiazol-3(2H)-one
Partition coefficient: n-octanol/water: 0,7

Oxydipropanol
Partition coefficient: n-octanol/water: -0,462

Bioconcentration factor (BCF)

1,2-benzisothiazol-3(2H)-one
Bioconcentration factor (BCF): 6,95

12.4. **Mobility in soil**
Toxicological data are not available.

12.5. **Results of PBT and vPvB assessment**

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

12.6. **Endocrine disrupting properties**
Not applicable

12.7. **Other adverse effects**
No information available.

SECTION 13: Disposal considerations

13.1. **Waste treatment methods**

Appropriate disposal / Product
Recommendation
Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way.

List of proposed waste codes/waste designations in accordance with EWC
160305* organic wastes containing hazardous substances
*Hazardous waste according to Directive 2008/98/EC (waste framework directive).

Appropriate disposal / Package
Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

SECTION 14: Transport information

14.1. **UN number or ID number**

UN 1719

14.2. **UN proper shipping name**

Land transport (ADR/RID):	Caustic alkali liquid, n.o.s. (sodium hydroxide solution)
Sea transport (IMDG):	CAUSTIC ALKALI LIQUID, N.O.S. (sodium hydroxide solution, 1,2-benzisothiazol-3(2H)-one)
Air transport (ICAO-TI / IATA-DGR):	Caustic alkali liquid, n.o.s.

(sodium hydroxide solution)

14.3. **Transport hazard class(es)**

8

14.4. **Packing group**

II

14.5. **Environmental hazards** *

Land transport (ADR/RID)	ENVIRONMENTALLY HAZARDOUS
Marine pollutant	p / 1,2-benzisothiazol-3(2H)-one

14.6. **Special precautions for user** *

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.
Advices on safe handling: see parts 6 - 8

Further information

Land transport (ADR/RID)

Tunnel restriction code	E

Sea transport (IMDG)

EmS-No.	F-A, S-B
Segregation group	IMDG Code segregation group 18 - alkalis
in packages <= 5 litres	not restricted 2.10.2.7

14.7. **Maritime transport in bulk according to IMO instruments**

No transport as bulk according IBC - Code.

SECTION 15: Regulatory information

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

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

Regulation (EU) No. 528/2012 on biocides
biocidal product
biocide, active substance

1,2-benzisothiazol-3(2H)-one	194,65 g/kg
Input	0.5- 2 g/kg

Authorization number for biocidal products:

PT 6, PT 12, PT13

Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive]
VOC-value (in g/L): 0,0

National regulations

15.2. **Chemical Safety Assessment** *

For the following substances of this mixture a chemical safety assessment has been carried out:

EC No. CAS No.	Designation	REACH No.
215-185-5 1310-73-2	sodium hydroxide	01-2119457892-27-XXXX

SECTION 16: Other information *

Full text of classification in section 3:

Acute Tox. 4 / H302	Acute toxicity (oral)	Harmful if swallowed.
Skin Irrit. 2 / H315	Skin corrosion/irritation	Causes skin irritation.
Eye Dam. 1 / H318	Serious eye damage/eye irritation	Causes serious eye damage.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
Aquatic Acute 1 / H400	Hazardous to the aquatic environment	Very toxic to aquatic organisms.
Aquatic Chronic 1 / H410	Hazardous to the aquatic environment	Very toxic to aquatic life with long lasting

		effects.
Skin Corr. 1A / H314	Skin corrosion/irritation	Causes severe skin burns and eye damage.
Met. Corr. 1 / H290	Corrosive to metals	May be corrosive to metals.

Classification procedure

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Met. Corr. 1	Corrosive to metals	On basis of test data.
Skin Corr. 1A	Skin corrosion/irritation	Calculation method.
Eye Dam. 1	Serious eye damage/eye irritation	Calculation method.
Skin Sens. 1	Respiratory or skin sensitisation	Calculation method.
Aquatic Chronic 2	Hazardous to the aquatic environment	Calculation method.

Abbreviations and acronyms

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
OEL	Occupational Exposure Limit Value
BLV	Biological Limit Value
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	Carcinogenic, Mutagenic and Reprotoxic
DIN	German Institute for Standardization / German industrial standard
DNEL	Derived No-Effect Level
EAKV	European Waste Catalogue Directive
EC	Effective Concentration
EC	European Community
EN	European Standard
IATA-DGR	International Air Transport Association – Dangerous Goods Regulations
IBC Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO-TI	International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG Code	International Maritime Code for Dangerous Goods
ISO	International Organization for Standardization
LC	Lethal Concentration
LD	Lethal Dose
MARPOL	Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
OECD	Organisation for Economic Cooperation and Development
PBT	persistent, bioaccumulative, toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
UN	United Nations
VOC	Volatile Organic Compounds
vPvB	very persistent and very bioaccumulative

Further information

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

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations.Without written approval, the product must not be used for purposes different from those mentioned in section 1.It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations.The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.

* Data changed compared with the previous version