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

1.1. Product identifier

Mixture identification:

Trade name: ULTRACARE DEEP PROTECTOR

Trade code: 9001523

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

Recommended use: Cleaner

Uses advised against: Data not available.

1.3. Details of the supplier of the safety data sheet

Company: MAPEI U.K. Ltd - Mapei House Steel Park Road
Halesowen - West Midlands B62 8HD

phone: +44(0)121 508 6970 - fax: +44(0)121 5086 960 - www.mapei.co.uk (office hour 8:30-17:30)

Responsable: sicurezza@mapei.it

1.4. Emergency telephone number

call NHS 111 or a doctor/OHES Environmental Ltd +44(0)333 333 9962

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

Aquatic Chronic 3 Harmful to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard statements

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.

P501 Dispose of contents/container in accordance with applicable regulations.

Special provisions according to Annex XVII of REACH and subsequent amendments:

None.

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1%

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

Not Relevant

3.2. Mixtures

Mixture identification: ULTRACARE DEEP PROTECTOR

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb.	Classification	Registration Number
≥0.5 - <0.6 %	Didecyldimethylammonium chloride	CAS:7173-51-5 EC:230-525-2 Index:612-131-00-6	Acute Tox. 4, H302; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 2, H411, M-Acute:10	01-2119945987-15-XXXX
≥0.25 - <0.3 %	N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	CAS:2372-82-9 EC:219-145-8	Acute Tox. 3, H301; Skin Corr. 1B, H314; STOT RE 2, H373; Aquatic Acute 1, H400; Aquatic Chronic 1, H410, M-Acute:10	01-2119980592-29-XXXX

≥0.25 - <0.3 %	alcohols, C12-14, ethoxylated	CAS:68439-50-9 EC:932-034-5	Acute Tox. 4, H302; Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 3, H412	EXEMPT
≥0.01 - <0.016 % %	hydrochloric acid ... %	CAS:7647-01-0 EC:231-595-7 Index:017-002-01-X	Met. Corr. 1, H290; Eye Dam. 1, H318; STOT SE 3, H335; Skin Corr. 1A, H314 Specific Concentration Limits: C ≥ 25%: Skin Corr. 1B H314 10% ≤ C < 25%: Skin Irrit. 2 H315 10% ≤ C < 25%: Eye Irrit. 2 H319 C ≥ 10%: STOT SE 3 H335	01-2119484862-27-xxxx

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

In case of eyes contact:

Wash immediately with water.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and the hazard label.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

Not available

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

Treatment:

N.A.

Not available

(see paragraph 4.1)

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO_2).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non emergency personnel:

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

For emergency responders:

Wear personal protection equipment.

6.2. Environmental precautions

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

Limit leakages with earth or sand.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Wash with plenty of water.

Retain contaminated washing water and dispose it.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Community Occupational Exposure Limits (OEL)

	OEL Type	Country	Occupational Exposure Limit
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine CAS: 2372-82-9	DFG	GERMANY	Short Term: Ceiling - 0,4 mg/m3
	National	GERMANY	Long Term: 0,05 mg/m3
	CHE	SWITZERLAND	Short Term: 0,4 mg/m3
	National	SLOVENIA	Long Term: 0,05 mg/m3; Short Term: 0,4 mg/m3
	SUVA	SWITZERLAND	Long Term: 0,05 mg/m3; Short Term: 0,4 mg/m3 SSc
hydrochloric acid ... % CAS: 7647-01-0	DFG	GERMANY	Short Term: Ceiling - 6 mg/m3 - 4 ppm
	ACGIH		A4 - Not Classifiable as a Human Carcinogen;upper respiratory tract irritation
	ACGIH		Short Term: Ceiling - 2 ppm
	National	SWEDEN	Long Term: 3 mg/m3 - 2 ppm
	National	FRANCE	Short Term: 7,6 mg/m3 - 5 ppm
	National	SPAIN	Long Term: 7,6 mg/m3 - 5 ppm; Short Term: 15 mg/m3 - 10 ppm
	National	GREECE	Long Term: 7 mg/m3 - 5 ppm; Short Term: 7 mg/m3 - 5 ppm
	National	DENMARK	Short Term: Ceiling - 8 mg/m3 - 5 ppm
	National	FINLAND	Short Term: 7,6 mg/m3 - 5 ppm
	National	GERMANY	Long Term: 3 mg/m3 - 2 ppm
	National	PORTUGAL	Long Term: 8 mg/m3 - 5 ppm; Short Term: 15 mg/m3 - 10 ppm
	National	NORWAY	Short Term: Ceiling - 7 mg/m3 - 5 ppm
	National	BELGIUM	Long Term: 8 mg/m3 - 5 ppm; Short Term: 15 mg/m3 - 10 ppm
	NDS	POLAND	Long Term: 5 mg/m3
	NDSCh	POLAND	Short Term: 10 mg/m3
	CHE	SWITZERLAND	Short Term: 6 mg/m3 - 4 ppm

	D	
NDS	NETHERLANDS	Long Term: 8 mg/m3; Short Term: 15 mg/m3
National	CZECH REPUBLIC	Long Term: 8 mg/m3
National	HUNGARY	Long Term: 8 mg/m3; Short Term: 16 mg/m3
Malaysia OEL	MALAYSIA	Short Term: Ceiling - 7,5 mg/m3 - 5 ppm
National	PORTUGAL	Short Term: Ceiling - 2 ppm
National	ESTONIA	Long Term: 8 mg/m3 - 5 ppm; Short Term: 15 mg/m3 - 10 ppm
National	LATVIA	Long Term: 8 mg/m3 - 5 ppm; Short Term: 15 mg/m3 - 10 ppm
National	CZECH REPUBLIC	Short Term: Ceiling - 15 mg/m3
National	SLOVAKIA	Short Term: Ceiling - 15 mg/m3
National	SLOVAKIA	Long Term: 8 mg/m3 - 5 ppm
National	SLOVENIA	Long Term: 8 mg/m3 - 5 ppm; Short Term: 16 mg/m3 - 10 ppm
National	UNITED KINGDOM	Long Term: 2 mg/m3 - 1 ppm; Short Term: 8 mg/m3 - 5 ppm
National	BULGARIA	Long Term: 8 mg/m3 - 5 ppm; Short Term: 15 mg/m3 - 10 ppm
National	ROMANIA	Long Term: 8 mg/m3 - 5 ppm; Short Term: 15 mg/m3 - 10 ppm
TUR	TURKEY	Long Term: 8 mg/m3 - 5 ppm; Short Term: 15 mg/m3 - 10 ppm
National	LITHUANIA	Long Term: 8 mg/m3 - 5 ppm; Short Term: 15 mg/m3 - 10 ppm
National	CROATIA	Long Term: 8 mg/m3 - 5 ppm; Short Term: 15 mg/m3 - 10 ppm
National	SLOVENIA	Long Term: 8 mg/m3 - 5 ppm; Short Term: 15 mg/m3 - 10 ppm
EU		Long Term: 8 mg/m3 - 5 ppm; Short Term: 15 mg/m3 - 10 ppm

Predicted No Effect Concentration (PNEC) values

N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine CAS: 2372-82-9	Exposure Route: Fresh Water; PNEC Limit: 0,001 mg/l
	Exposure Route: Marine water; PNEC Limit: 0,0001 mg/l
	Exposure Route: Marine water sediments; PNEC Limit: 0,85 mg/kg
	Exposure Route: Freshwater sediments; PNEC Limit: 8,5 mg/kg
hydrochloric acid ... % CAS: 7647-01-0	Exposure Route: Fresh Water; PNEC Limit: 0,036 mg/l
	Exposure Route: Marine water; PNEC Limit: 0,036 mg/l
	Exposure Route: Intermittent release; PNEC Limit: 0,045 mg/l
	Exposure Route: Soil; PNEC Limit: 0,036 mg/kg

Derived No Effect Level (DNEL) values

N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine CAS: 2372-82-9	Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects Worker Industry: 2,35 mg/m3; Consumer: 0,7 mg/m3
	Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects Worker Industry: 0,91 mg/kg; Consumer: 0,54 mg/kg
	Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects Consumer: 0,2 mg/kg
hydrochloric acid ... % CAS: 7647-01-0	Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects Worker Industry: 15 mg/m3
	Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects Worker Industry: 8 mg/m3

8.2. Exposure controls

Eye protection:

Not needed for normal use. Anyway, operate according good working practices.

Protection for skin:

No special precaution must be adopted for normal use.

Protection for hands:

Suitable materials for safety gloves; EN ISO 374:

Polychloroprene - CR: thickness >=0,5mm; breakthrough time >=480min.

Nitrile rubber - NBR: thickness >=0,35mm; breakthrough time >=480min.

Butyl rubber - IIR: thickness >=0,5mm; breakthrough time >=480min.

Fluorinated rubber - FKM: thickness >=0,4mm; breakthrough time >=480min.

Neoprene gloves are suggested (0,5 mm) not recommended gloves: not waterproof gloves

Respiratory protection:

Personal Protective Equipment should comply with relevant CE standards (as EN ISO 374 for gloves and EN ISO 166 for goggles), correctly maintained and stored. Consult the supplier to check the suitability of equipment against specific chemicals and for user information.

Respiratory protection must be used where exposure levels exceed workplace exposure limits. Refer to appropriate EN standards, like EN 136, 140, 143, 149, 14387 for information on selection and use of appropriate respiratory protection equipment.

Hygienic and Technical measures

Not available

Appropriate engineering controls:

Not available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid

Appearance: liquid

Colour: transparent

Odour: Characteristic

Melting point/freezing point: 0 °C (32 °F)

Boiling point or initial boiling point and boiling range: 100 °C (212 °F)

Flammability: N.A.

Lower and upper explosion limit: Lower and upper explosion limit: Not available

Flash point: Not available

Auto-ignition temperature: Not available

Decomposition temperature: Not available

pH: 9.00

Viscosity: 15.00 mPA-s

Kinematic viscosity: <= 14 mm2/sec (40 °C) mm2/s

Solubility in water: easily soluble

Solubility in oil: insoluble

Partition coefficient n-octanol/water (log value): Not available

Vapour pressure: 2.34

Density and/or relative density: 1.00 g/cm3

Relative vapour density: 0.017

Particle characteristics:

Particle size: Not available

9.2. Other information

Miscibility: Not available

Conductivity: Not available

No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

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

Toxicological Information of the Preparation

a) acute toxicity	Not classified
	Based on available data, the classification criteria are not met
b) skin corrosion/irritation	Not classified
	Based on available data, the classification criteria are not met
c) serious eye damage/irritation	Not classified
	Based on available data, the classification criteria are not met
d) respiratory or skin sensitisation	Not classified
	Based on available data, the classification criteria are not met
e) germ cell mutagenicity	Not classified
	Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified
	Based on available data, the classification criteria are not met
g) reproductive toxicity	Not classified
	Based on available data, the classification criteria are not met
h) STOT-single exposure	Not classified
	Based on available data, the classification criteria are not met
i) STOT-repeated exposure	Not classified
	Based on available data, the classification criteria are not met
j) aspiration hazard	Not classified
	Based on available data, the classification criteria are not met

Toxicological information on main components of the mixture:

Didecyldimethylammonium chloride	a) acute toxicity	LD50 Oral Rat = 329, mg/kg
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	a) acute toxicity	LD50 Oral Rat = 261 mg/kg bw
alcohols, C12-14, ethoxylated	a) acute toxicity	LD50 Skin Rabbit > 2000 mg/kg

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration >= 0.1%

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

List of Eco-Toxicological properties of the product

The product is classified: Aquatic Chronic 3(H412)

List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
Didecyldimethylammonium chloride	CAS: 7173-51-5 - EINECS: 230-525-2 - INDEX: 612-131-00-6	a) Aquatic acute toxicity : LC50 Fish Danio rerio = 0,19 mg/L 96h ECHA
		a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 0,062 mg/L 48h ECHA
		b) Aquatic chronic toxicity : NOEC Daphnia Daphnia magna = 0,021 mg/L 21d ECHA

N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	CAS: 2372-82-9 - EINECS: 219-145-8	a) Aquatic acute toxicity : EC50 Daphnia > 0,077 mg/L 48h ECHA
		b) Aquatic chronic toxicity : NOEC Daphnia > 0,024 mg/L 21d ECHA
		a) Aquatic acute toxicity : EC50 Algae > 0,01 mg/L 72h ECHA
		a) Aquatic acute toxicity : LC50 Fish Danio rerio = 0,431 mg/L 96h ECHA
hydrochloric acid ... %	CAS: 7647-01-0 - EINECS: 231-595-7 - INDEX: 017-002-01-X	a) Aquatic acute toxicity : LC50 Fish = 20,5 mg/L 24h
		a) Aquatic acute toxicity : EC50 Daphnia = 0,45 mg/L 48h
		a) Aquatic acute toxicity : EC50 Algae = 0,73 mg/L 72h

12.2. Persistence and degradability

Component	Persitence/Degradability:
Didecyldimethylammonium chloride	Readily biodegradable

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1%

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration >= 0.1%

12.7. Other adverse effects

Not available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Recover if possible.

A waste code (EWC) according to European List of Waste (LoW) cannot be specified, due to dependence on the usage. Contact and send to an authorized waste disposal service.

Methods of disposal:

Disposal of this product, solutions, packaging and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor.

Do not dispose of waste into sewers.

Hazardous waste: Yes

Disposal considerations:

Do not allow to enter drains or watercourses.

Dispose of product according to all federal, state and local applicable regulations.

If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.

Dispose of containers contaminated by the product in accordance with local or national legal provisions. For further information, contact your local waste authority.

Special precautions:

This material and its container must be disposed of in a safe way. Care should be taken when handling untreated empty containers.

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Empty containers or liners may retain some product residues. Do not re-use empty containers.

SECTION 14: Transport information

Not classified as dangerous in the meaning of transport regulations.

14.1. UN number or ID number

Not Applicable

14.2. UN proper shipping name

Not Applicable

14.3. Transport hazard class(es)

Not Applicable

14.4. Packing group

Not Applicable

14.5. Environmental hazards

Not Applicable

14.6. Special precautions for user

Not Applicable

Road and Rail (ADR-RID):

Not Applicable

Air (IATA):

Not Applicable

Sea (IMDG):

Not Applicable

14.7. Maritime transport in bulk according to IMO instruments

Not Applicable

SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EU) n. 2020/878
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
Regulation (EU) n. 2017/776 (ATP 10 CLP)
Regulation (EU) n. 2018/669 (ATP 11 CLP)
Regulation (EU) n. 2018/1480 (ATP 13 CLP)
Regulation (EU) n. 2019/521 (ATP 12 CLP)
Regulation (EU) n. 2020/217 (ATP 14 CLP)
Regulation (EU) n. 2020/1182 (ATP 15 CLP)
Regulation (EU) n. 2021/643 (ATP 16 CLP)
Regulation (EU) n. 2021/849 (ATP 17 CLP)
Regulation (EU) n. 2022/692 (ATP 18 CLP)
Regulation (EU) n. 2023/707
Regulation (EU) n. 2023/1434 (ATP 19 CLP)
Regulation (EU) n. 2023/1435 (ATP 20 CLP)
Regulation (EU) n. 2024/197 (ATP 21 CLP)
Regulation (EU) n. 2024/2564 (ATP 22 CLP)
Regulation (EU) n. 2024/2865
Regulation (EU) n. 2025/1222 (ATP 23 CLP)
Provisions related to directive EU 2012/18 (Seveso III):

None

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: 3
Restrictions related to the substances contained: 40, 75

SVHC Substances:

SVHC substances not present in a concentration ≥ 0.1% (w/w)

National regulations

Produktregisteret Norge: 677118
MAL-kode: 00-6 (1993)
Lagerklasse (TRGS-510): 10 - Combustible liquids, that cannot be assigned to any of the aforementioned LGK

German Water Hazard Class.

Class 1: slightly hazardous for water.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Code	Description
H290	May be corrosive to metals.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Code	Hazard class and hazard category	Description
2.16/1	Met. Corr. 1	Substance or mixture corrosive to metals, Category 1
3.1/3/Oral	Acute Tox. 3	Acute toxicity (oral), Category 3
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.2/1A	Skin Corr. 1A	Skin corrosion, Category 1A
3.2/1B	Skin Corr. 1B	Skin corrosion, Category 1B
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3
3.9/2	STOT RE 2	Specific target organ toxicity — repeated exposure, Category 2
4.1/A1	Aquatic Acute 1	Acute aquatic hazard, category 1
4.1/C1	Aquatic Chronic 1	Chronic (long term) aquatic hazard, category 1
4.1/C2	Aquatic Chronic 2	Chronic (long term) aquatic hazard, category 2
4.1/C3	Aquatic Chronic 3	Chronic (long term) aquatic hazard, category 3

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Aquatic Chronic 3, H412	Calculation method

If appropriate, specific provisions in relation to possible training for workers are mentioned in section 2. Any training related to safety in the workplace must in any case refer to a risk assessment that must be carried out by a company safety officer taking into account the specific operating and environmental conditions in which the products are used.

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This SDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor
BEI: Biological Exposure Index
BOD: Biochemical Oxygen Demand
CAS: Chemical Abstracts Service (division of the American Chemical Society).
CAV: Poison Center
CE: European Community
CLP: Classification, Labeling, Packaging.
CMR: Carcinogenic, Mutagenic and Reprotoxic
COD: Chemical Oxygen Demand
COV: Volatile Organic Compound
CSA: Chemical Safety Assessment
CSR: Chemical Safety Report
DMEL: Derived Minimal Effect Level
DNEL: Derived No Effect Level.
DPD: Dangerous Preparations Directive
DSD: Dangerous Substances Directive
EC50: Half Maximal Effective Concentration
ECHA: European Chemicals Agency
EINECS: European Inventory of Existing Commercial Chemical Substances.
ES: Exposure Scenario
GefStoffVO: Ordinance on Hazardous Substances, Germany.
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
IC50: half maximal inhibitory concentration
ICAO: International Civil Aviation Organization.
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG: International Maritime Code for Dangerous Goods.
INCI: International Nomenclature of Cosmetic Ingredients.
IRCCS: Scientific Institute for Research, Hospitalization and Health Care
KAFH: KAFH
KSt: Explosion coefficient.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
LDLo: Leathal Dose Low
N.A.: Not Applicable
N/A: Not Applicable
N/D: Not defined/ Not available
NA: Not available
NIOSH: National Institute for Occupational Safety and Health
NOAEL: No Observed Adverse Effect Level
OSHA: Occupational Safety and Health Administration
PBT: Persistent, Bioaccumulative and Toxic
PGK: Packaging Instruction
PNEC: Predicted No Effect Concentration.
PSG: Passengers
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
vPvB: Very Persistent, Very Bioaccumulative.
WGK: German Water Hazard Class.

Paragraphs modified from the previous revision:

- SECTION 2: Hazards identification
- SECTION 8: Exposure controls/personal protection
- SECTION 9: Physical and chemical properties
- SECTION 11: Toxicological information
- SECTION 12: Ecological information
- SECTION 15: Regulatory information