

1. Product and company identification

Product identifier

Trade name: Neopren Adhesives

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

General use: Adhesive for orthopedic procedures. Reserved for industrial and professional use.

Details of the supplier of the safety data sheet

Company name: Otto Bock Health Care

Street/POB-No.: 3820 W. Great Lakes Drive

Postal Code, city: Salt Lake City, UT 84120
USA

WWW: www.ottobockus.com

Telephone: +1 (801) 956-2400

Telefax: +1 (801) 956-2401

Department responsible for information:

Quality Department,
Telephone: +1 (801) 954-2304 (7 AM – 3 PM, Mountain Time),
Email: USRegulatory@ottobock.com

Additional information: This safety data sheet pertains to the following products:

TRX=4 Neopren Adhesive

636W65 - Neopren Adhesive

Corporate headquarters:

Ottobock SE & Co. KGaA

Max-Näder-Straße 15

Duderstadt

Germany

Emergency phone number

CHEMTREC, Telephone: +1 (800) 424-9300

Transport:

CONSULTANK Lutz Harder GmbH (Contract QUALI003)

Telephone: +49 (0)178-4337434 (from USA: 01149 178 4337434)

2. Hazards identification

Emergency overview

Appearance: Form: liquid

Color: yellowish

Odor: characteristic

Classification: Flammable Liquid - Category 2. Skin Irritation - Category 2. Eye Irritation - Category 2A. Specific Target Organ Toxicity (Single Exposure) - Category 3. Aquatic toxicity - acute - Category 1. Aquatic toxicity - chronic - Category 1.

Hazard symbols:



Signal word: **Danger**

Hazard statements:

- Highly flammable liquid and vapor.
- Causes skin irritation.
- Causes serious eye irritation.
- May cause drowsiness or dizziness.
- Very toxic to aquatic life with long lasting effects.

Precautionary statements:

- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Avoid breathing vapors.
- Avoid release to the environment.
- Wear protective gloves/protective clothing/eye protection/face protection.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Call a POISON CENTER/doctor if you feel unwell.
- Store in a well-ventilated place. Keep cool.

Regulatory status

This material is considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200).

Hazards not otherwise classified

see section 11: Toxicological information

3. Composition / Information on ingredients

Chemical characterization: Adhesive on basis of Polychloroprene in organic solvents. Contains resins.

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 110-82-7	Cyclohexane	25 - 50 %	Flammable Liquid - Category 2. Skin Irritation - Category 2. Specific Target Organ Toxicity (Single Exposure) - Category 3. Aspiration Toxicity - Category 1. Aquatic toxicity - acute - Category 1 (M-factor = 1). Aquatic toxicity - chronic - Category 1 (M-factor = 1).
CAS 79-20-9	Methyl acetate	10 - 25 %	Flammable Liquid - Category 2. Eye Irritation - Category 2A. Specific Target Organ Toxicity (Single Exposure) - Category 3.
CAS 67-64-1	Acetone	10 - 25 %	Flammable Liquid - Category 2. Eye Irritation - Category 2A. Specific Target Organ Toxicity (Single Exposure) - Category 3.
CAS 107-83-5	Hexane, mixture of isomers (containing < 5 % n-hexane (110-54-3))	< 5 %	Flammable Liquid - Category 2. Skin Irritation - Category 2. Specific Target Organ Toxicity (Single Exposure) - Category 3. Aspiration Toxicity - Category 1. Aquatic toxicity - chronic - Category 2.
CAS 142-82-5	n-Heptane	< 5 %	Flammable Liquid - Category 2. Skin Irritation - Category 2. Specific Target Organ Toxicity (Single Exposure) - Category 3. Aspiration Toxicity - Category 1. Aquatic toxicity - acute - Category 1. Aquatic toxicity - chronic - Category 1.
CAS 110-54-3	n-Hexane	0.5 - 1 %	Flammable Liquid - Category 2. Skin Irritation - Category 2. Eye Irritation - Category 2A. Reproductive toxicant - Category 2. Specific Target Organ Toxicity (Single Exposure) - Category 3. Specific Target Organ Toxicity (Repeated Exposure) - Category 1. Aspiration Toxicity - Category 1. Aquatic toxicity - acute - Category 2.

4. First aid measures

General information:	Take off immediately all contaminated clothing. Move victim to fresh air.
In case of inhalation:	Provide fresh air. Seek medical treatment in case of troubles. If victim is at risk of losing consciousness, position and transport on their side.
Following skin contact:	Immediately clean with water and soap followed by thorough rinsing. In case of skin irritation, consult a physician.
After eye contact:	Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. In case of troubles or persistent symptoms, consult an ophthalmologist.
After swallowing:	Do not induce vomiting. Immediately get medical attention.

Most important symptoms/effects, acute and delayed

skin: Irritates skin and mucous membranes.
 eye: irritant
 Sensitisation: Not known to cause sensitization.
 composition: irritant, calculation method

Information to physician

Treat symptomatically.

5. Fire fighting measures

Flash point/flash point range:

-4 °F

Auto-ignition temperature: not self-igniting

Suitable extinguishing media:

water mist, Foam, dry chemical powder, carbon dioxide

Extinguishing media which must not be used for safety reasons:

Full water jet

Specific hazards arising from the chemical

On heating or in case of fire toxic gases may form.

Protective equipment and precautions for firefighters:

In case of fire and/or explosion do not breathe fumes.

When vapors form, use respiratory protection.

Additional information:

You have to dispose of contaminated extinguishing water according to the regulations of the authorities.

6. Accidental release measures

Personal precautions:

Wear appropriate protective equipment. Keep unprotected people away.

Wear breathing apparatus if exposed to vapors/dusts/aerosols.

Provide adequate ventilation.

Keep away from sources of ignition.

Environmental precautions:

Do not allow to enter drains, basements or pits.

Methods for clean-up:

Soak up with absorbent materials such as sand, siliceous earth, acid- or universal binder.

Store in special closed containers and dispose of according to ordinance.

Provide adequate ventilation.

Do not remove residual product with water and detergent.

Additional information:

Keep away from sources of ignition.

If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

7. Handling and storage

Handling

Advices on safe handling:

Provide good ventilation and/or an exhaust system in the work area.

Avoid the formation of aerosol.

Precautions against fire and explosion:

Keep away from sources of ignition - No smoking.
Take precautionary measures against static discharges.
Keep away from heat.

Specific use(s)

Adhesive for orthopedic procedures.

Storage

Requirements for storerooms and containers:

Keep container tightly closed in a cool, well-ventilated place. Keep container dry.
Protect from frost.

Further details:

Vapors form potentially explosive mixtures with air, which are heavier than air. Air-Vapor mixture may travel great distances at floor level and lead to backflash when exposed to an ignition source.
Do not allow to enter drains or the environment.

8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
110-82-7	Cyclohexane	USA: ACGIH: TWA USA: IDLH: TWA USA: NIOSH: TWA USA: OSHA: TWA	344 mg/m ³ ; 100 ppm 1,300 ppm [10% LEL] 1,050 mg/m ³ ; 300 ppm 1,050 mg/m ³ ; 300 ppm
79-20-9	Methyl acetate	USA: ACGIH: STEL USA: ACGIH: TWA USA: IDLH: TWA USA: NIOSH: STEL USA: NIOSH: TWA USA: OSHA: TWA	757 mg/m ³ ; 250 ppm 606 mg/m ³ ; 200 ppm 3,100 ppm [10% LEL] 760 mg/m ³ ; 250 ppm 610 mg/m ³ ; 200 ppm 610 mg/m ³ ; 200 ppm
67-64-1	Acetone	USA: ACGIH: STEL USA: ACGIH: TWA USA: IDLH: TWA USA: NIOSH: TWA USA: OSHA: TWA	500 ppm 250 ppm 2,500 ppm 590 mg/m ³ ; 250 ppm 2,400 mg/m ³ ; 1,000 ppm
107-83-5	Hexane, mixture of isomers (containing < 5 % n-hexane (110-54-3))	USA: ACGIH: TWA	200 ppm
		USA: NIOSH: Ceiling USA: NIOSH: TWA	1,800 mg/m ³ ; 510 ppm 350 mg/m ³ ; 100 ppm
142-82-5	n-Heptane	USA: ACGIH: STEL USA: ACGIH: TWA USA: IDLH: TWA USA: NIOSH: Ceiling USA: NIOSH: TWA USA: OSHA: TWA	400 ppm 200 ppm 750 ppm 1,800 mg/m ³ ; 440 ppm 350 mg/m ³ ; 85 ppm 2,000 mg/m ³ ; 500 ppm
110-54-3	n-Hexane	USA: ACGIH: TWA	176 mg/m ³ ; 50 ppm (may be absorbed through the skin)
		USA: IDLH: TWA USA: NIOSH: TWA USA: OSHA: TWA	1,100 ppm [10% LEL] 180 mg/m ³ ; 50 ppm 1,800 mg/m ³ ; 500 ppm

Biological limit values:

CAS No.	Designation	Type	Limit value	Parameter	Sampling
110-82-7	Cyclohexane	USA: ACGIH-BEI, urine	50 mg/g creatinine	1,2-Cyclohexanediol	end of shift at end of work week
67-64-1	Acetone	USA: ACGIH-BEI, urine	25 mg/L	acetone	end of exposure or end of shift
110-54-3	n-Hexane	USA: ACGIH-BEI, urine	0.5 mg/L	2,5-Hexanedione	end of exposure or end of shift

Engineering controls

Provide good ventilation and/or an exhaust system in the work area.

Avoid the formation of aerosol.

See also information in chapter 7, section storage.

Personal protection equipment (PPE)

Eye/face protection: Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010

Skin protection: Wear suitable protective clothing.

Solvent resistant protective gloves according to EN 374.

Glove material: Nitrile rubber, Butyl caoutchouc (butyl rubber)

Breakthrough time: >480 min.

Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Respiratory protection: When vapors form, use respiratory protection.

In case of prolonged or repeated exposures: use self-contained breathing apparatus.

Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded.

Respiratory protection is not necessary if room is well ventilated.

General hygiene considerations:

Keep away from food, drink and animal feedingstuffs.

Take off immediately all contaminated clothing.

Wash hands before breaks and after work.

Do not breathe vapor/aerosol.

Avoid contact with skin and eyes.

Environmental exposure controls

Refer to 6.: Section "Environmental precautions".

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance:	Form: liquid Color: yellowish
Odor:	characteristic
Odor threshold:	No data available
pH:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	132.8 °F
Flash point/flash point range:	-4 °F
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	LEL (Lower Explosion Limit): 1.20 Vol-% UEL (Upper Explosive Limit): 16.00 Vol-%
Vapor pressure:	at 68 °F: 247 hPa
Vapor density:	No data available
Density:	at 68 °F: 0.86 g/mL
Water solubility:	at 68 °F: immiscible up to slightly miscible
Partition coefficient: n-octanol/water:	No data available

Auto-ignition temperature:	not self-igniting
Thermal decomposition:	No data available
Viscosity, dynamic:	at 68 °F: 1,000 mPa*s
Explosive properties:	Product is not explosive. Vapors form explosive mixtures with air.
Ignition temperature:	500 °F
Solvent content:	80 %
Solid content:	20 %

10. Stability and reactivity

Reactivity:	Vapors form explosive mixtures with air.
Chemical stability:	Product is stable under normal storage conditions.
Possibility of hazardous reactions:	No dangerous reactions are known.
Conditions to avoid:	No data available
Incompatible materials:	No data available
Hazardous decomposition products:	In case of fire may be liberated: carbon monoxide and carbon dioxide
Thermal decomposition:	No data available

11. Toxicological information

Toxicological tests

Acute toxicity:	LD50 Rat, oral, Cyclohexane: 1,297 mg/kg
Toxicological effects:	Acute toxicity (oral): Lack of data. Acute toxicity (dermal): Lack of data. Acute toxicity (inhalative): Lack of data. Skin corrosion/irritation: Skin Irritation - Category 2 = Causes skin irritation. Serious eye damage/irritation: Eye Irritation - Category 2A = Causes serious eye irritation. Sensitisation to the respiratory tract: Lack of data. Skin sensitisation: Lack of data. Germ cell mutagenicity/Genotoxicity: Lack of data. Carcinogenicity: Lack of data. Reproductive toxicity: Lack of data. Effects on or via lactation: Lack of data. Specific target organ toxicity (single exposure): Specific Target Organ Toxicity (Single Exposure) - Category 3 = May cause drowsiness or dizziness. Specific target organ toxicity (repeated exposure): Lack of data. Aspiration hazard: Lack of data.

Symptoms

skin: Irritates skin and mucous membranes.
 eye: irritant
 Sensitisation: Not known to cause sensitization.
 composition: irritant, calculation method

12. Ecological information

Ecotoxicity

Aquatic toxicity: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Mobility in soil

No data available

Persistence and degradability

Further details: No data available

Additional ecological information

Volatile organic compounds (VOC):

79.73 % by weight / 685.7 g/L

General information: Do not allow to penetrate into soil, waterbodies or drains.

13. Disposal considerations

Product

Recommendation: Incinerate as hazardous waste according to applicable local, state, and federal regulations.

Package

Recommendation: Dispose of waste according to applicable legislation.

14. Transport information

UN number

ADR/RID, IMDG, IATA-DGR:

UN 1133

UN proper shipping name

ADR/RID, IATA-DGR: UN 1133, ADHESIVES

IMDG: UN 1133, ADHESIVES (Acetone and methyl acetate), MARINE POLLUTANT

Transport hazard class(es)

ADR/RID: Class 3, Code: F1

IMDG: Class 3, Subrisk -

IATA-DGR: Class 3

Packing group

ADR/RID, IMDG, IATA-DGR:

II

Environmental hazards

Marine pollutant: yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No data available

USA: Department of Transportation (DOT)

Identification number: UN1133
 Proper shipping name: UN 1133, ADHESIVES
 Hazard class or Division: 3
 Packing Group: II
 Labels: 3
 Special Provisions: 149, B52, IB2, T4, TP1, TP8
 Packaging – Exceptions: 150
 Packaging – Non-bulk: 173
 Packaging – Bulk: 242
 Quantity limitations – Passenger aircraft / rail: 5 L
 Quantity limitations – Cargo only: 60 L
 Vessel stowage – Location: B
 Vessel stowage – Other:

Sea transport (IMDG)

UN number: UN 1133
 Proper shipping name: UN 1133, ADHESIVES (Acetone and methyl acetate), MARINE POLLUTANT
 Class or division, Subsidiary risk: Class 3, Subrisk -
 Packing Group: II
 EmS: F-E, S-D
 Special Provisions: -
 Limited quantities: 5 L
 Excepted quantities: E2
 Package - Instructions: P001
 Package - Provisions: PP1
 IBC - Instructions: IBC02
 IBC - Provisions: -
 Tank instructions - IMO: -
 Tank instructions - UN: T4
 Tank instructions - Provisions: TP1, TP8
 Stowage and handling: Category B.
 Properties and observations: Adhesives are solutions of gums, resins, etc., usually volatile due to the solvents. Miscibility with water depends upon their composition.
 Marine pollutant: yes
 Segregation group: none



Air transport (IATA)

UN/ID number:	UN 1133
Proper shipping name::	UN 1133, ADHESIVES
Class or division, Subsidiary risk:	Class 3
Packing Group:	II
Hazard label:	Flamm. liquid
Excepted Quantity Code:	E2
Passenger and Cargo Aircraft: Ltd.Qty.:	Pack.Instr. Y341 - Max. Net Qty/Pkg. 1 L
Passenger and Cargo Aircraft:	Pack.Instr. 353 - Max. Net Qty/Pkg. 5 L
Cargo Aircraft only:	Pack.Instr. 364 - Max. Net Qty/Pkg. 60 L
Special Provisions:	A3
Emergency Response Guide-Code (ERG):	3L

15. Regulatory information

National regulations - U.S. Federal Regulations

Cyclohexane:	<p>TSCA Inventory: listed</p> <p>Clean Air Act:</p> <p>CAA SOCM Chemical: yes</p> <p>Clean Water Act:</p> <p>CWA Hazardous Substances: RQ 1000 lbs.</p> <p>Other Environmental Laws:</p> <p>CERCLA: RQ 1000 lbs.</p> <p>RCRA Hazardous Wastes: Code U056</p> <p>SARA Title III - Section 313, Toxic Release: Conc. 1.0% / Threshold Standard</p> <p>NIOSH Recommendations:</p> <p>Occupational Health Guideline: 0163</p>
Methyl acetate:	<p>TSCA Inventory: listed</p> <p>Clean Air Act:</p> <p>CAA SOCM Chemical: yes</p> <p>NIOSH Recommendations:</p> <p>Occupational Health Guideline: 0391*</p>
Acetone:	<p>TSCA Inventory: listed</p> <p>Clean Air Act:</p> <p>CAA SOCM Chemical: yes</p> <p>Other Environmental Laws:</p> <p>CERCLA: RQ 5000 lbs.</p> <p>RCRA Hazardous Wastes: Code U002</p> <p>RCRA Groundwater Monitoring: Methods 8240 / PQL 100</p> <p>NIOSH Recommendations:</p> <p>Occupational Health Guideline: 0004*</p>
Hexane, mixture of isomers (containing < 5 % n-hexane (110-54-3)):	<p>TSCA Inventory: listed</p>
n-Heptane:	<p>TSCA Inventory: listed</p> <p>NIOSH Recommendations:</p> <p>Occupational Health Guideline: 0312</p>
n-Hexane:	<p>TSCA Inventory: listed</p> <p>Clean Air Act:</p> <p>CAA Hazardous Air Pollutants: yes</p> <p>CAA SOCM Chemical: yes</p> <p>Other Environmental Laws:</p> <p>CERCLA: RQ 5000 lbs.</p> <p>SARA Title III - Section 313, Toxic Release: Conc. 1.0% / Threshold Standard</p> <p>NIOSH Recommendations:</p> <p>Occupational Health Guideline: 0322</p>

National regulations - U.S. State Regulations

Cyclohexane:	<p>California Proposition 65 code: none</p> <p>Delaware Air Quality Management List: DRQ: 1000 - RQ State: Federal Regulations Apply</p> <p>Idaho Air Pollutant List: Title 585: AAC: 52,5 - EL: 70 - OEL: 1050 - Title 586: -</p> <p>Maine Hazardous Air Pollutants: Me 2005: HAP - Hap Rpt: 20000</p> <p>Massachusetts Haz. Substance codes: 2,4,5,6 F8 F9</p> <p>Minnesota Haz. Substance: Codes: AO - Ratings: 7.94 - Status: Title III. TRI.</p> <p>New Jersey RTK Hazardous Substance: DOT: 1145 - Sub No.: 0565 - TPQ: -</p> <p>New York List of Hazardous Substances: RQ-Air: 1000 - RQ-Land: 1 - Note: No Note Associated with this chemical.</p> <p>Pennsylvania Haz. Substance code: E</p> <p>Washington Air Contaminant: TWA: 300 ppm - 1050 mg</p>
Methyl acetate:	<p>Idaho Air Pollutant List: Title 585: AAC: 30.5 - EL: 40.7 - OEL: 610</p> <p>Massachusetts Haz. Substance codes: 2,4,5,6</p> <p>Minnesota Haz. Substance: Codes: AO - Ratings: -</p> <p>Pennsylvania Haz. Substance code: -</p> <p>Washington Air Contaminant: TWA: 200 ppm - 610 mg - STEL: 250 ppm - 760 mg</p>
Acetone:	<p>California Prop 65 List: None</p> <p>Delaware Air Quality Management List: DRQ: 5000 - RQ State: Federal Regulations Apply</p> <p>Idaho Air Pollutant List: Title 585: AAC: 89 - EL: 119 - OEL: 1780</p> <p>Massachusetts Haz. Substance codes: 2,4,5,6 F8 F9</p> <p>Minnesota Haz. Substance: Codes: AON - Ratings: 7.16 - Status: Title III</p> <p>New York List of Hazardous Substances: RQ-Air: 5000 - RQ-Land: 1 - Note: No Note Associated with this chemical.</p> <p>Pennsylvania Haz. Substance code: E</p> <p>Washington Air Contaminant: TWA: 750 ppm - 1800 mg - STEL: 1000 ppm - 2400 mg</p>
n-Heptane:	<p>California Proposition 65 code: not listed</p> <p>Idaho Air Pollutant List: Title 585: AAC: 82 - EL: 109 - OEL: 1640 - Title 586: -</p> <p>Massachusetts Haz. Substance codes: 2,4,5,6</p> <p>Minnesota Haz. Substance: Codes: ANO - Ratings: -</p> <p>Pennsylvania Haz. Substance code: -</p> <p>Washington Air Contaminant: TWA: 400 ppm - 1600 mg - STEL: 500 ppm - 2000 mg</p>

n-Hexane:

California Proposition 65: cancer
California Proposition 65 code: -
Delaware Air Quality Management List:
DRQ: 5000 - RQ State: Federal Regulations Apply
Idaho Air Pollutant List:
Title 585: AAC: 9 - EL: 12 - OEL: 180 - Title 586: -
Maine Hazardous Air Pollutants:
Me 2005: HAP - Hap Rpt: 2000
Massachusetts Haz. Substance codes: 2,4,5,6
Minnesota Haz. Substance:
Codes: ANO - Ratings: 9.57 - Status: Air Pollutant Title III. TRI.
New Jersey RTK Hazardous Substance:
DOT: 1208 - Sub No.: 1340 - TPQ: -
New York List of Hazardous Substances:
RQ-Air: 1 - RQ-Land: 1 - Note: No Note Associated with this chemical.
Pennsylvania Haz. Substance code: -
Washington Air Contaminant:
TWA: 50 ppm - 180 mg

National regulations - Canada

Cyclohexane: DSL: listed
Methyl acetate: DSL: listed
Acetone: DSL: listed
Hexane, mixture of isomers (containing < 5 % n-hexane (110-54-3)): DSL: listed
n-Heptane: DSL: listed
n-Hexane: DSL: listed

National regulations - Great Britain

Hazchem-Code: •3YE

16. Other information

Text for labeling:

Contains 25 - 50 % Cyclohexane, 10 - 25 % Methyl acetate, 10 - 25 % Acetone, < 5 % Hexane, mixture of isomers (containing < 5 % n-hexane (110-54-3)), < 5 % n-Heptane, 0.5 - 1 % n-Hexane.

Hazard rating systems:



Contains acetone and methyl acetate

NFPA Hazard Rating:

Health: 1 (Slight)

Fire: 3 (Serious)

Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 1 (Slight)

Flammability: 3 (Serious)

Physical Hazard: 0 (Minimal)

Personal Protection: X = Consult your supervisor

HEALTH	1
FLAMMABILITY	3
PHYSICAL HAZARD	0
	X

Abbreviations and acronyms:

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
 Aquatic toxicity - acute: Hazardous to the aquatic environment - acute
 Aquatic toxicity - chronic: Hazardous to the aquatic environment - chronic
 AS/NZS: Australian Standards/New Zealand Standards
 Aspiration Toxicity: Aspiration toxicity
 CAS: Chemical Abstracts Service
 CFR: Code of Federal Regulations
 CLP: Classification, Labelling and Packaging
 DMEL: Derived minimal effect level
 DNEL: Derived no-effect level
 EC: European Community
 EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods
 EN: European Standard
 EQ: Excepted quantities
 Eye Irritation: Eye irritation
 Flammable Liquid: Flammable liquid
 IATA: International Air Transport Association
 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
 IMDG Code: International Maritime Dangerous Goods Code
 IMO: International Maritime Organization
 LD50: Lethal dose 50%
 LEL: Lower Explosion Limit
 MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
 M-factor: Multiplication factor
 OEL: Occupational Exposure Limit Value
 OSHA: Occupational Safety and Health Administration
 PBT: Persistent, bioaccumulative and toxic
 PNEC: Predicted no-effect concentration
 Reproductive toxicant: Reproductive toxicity
 RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
 Skin Irritation: Skin irritation
 STOT RE: Specific target organ toxicity - repeated exposure
 STOT SE: Specific target organ toxicity - single exposure
 TLV: Threshold Limit Value
 TRGS: Technical Rules for Hazardous Substances
 UN: United Nations
 vPvB: Very persistent and very bioaccumulative
 WEL: Workplace Exposure Limit

Reason of change: **Changes in section 8: Occupational exposure limit values**

Date of first version: **6/11/1999**

Department issuing data sheet

Contact person: **see section 1: Department responsible for information**

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.