

1. Product and company identification

Product identifier

Trade name: 636W71 - CP Contact Adhesive

This safety data sheet pertains to the following products:
636W71=4 = CP Kontaktklebstoff, 4 KG Gebinde

Recommended use and restrictions on use

General use: Adhesive for orthopedic procedures.
For use in industrial installations and professional treatment only.

Initial supplier identifier

Company name: Otto Bock HealthCare Canada Ltd.

Street/POB-No.: 5470 Harvester Road

Postal Code, city: Burlington, ON L7L 5N5, CA
Canada

WWW: www.ottobock.ca

E-mail: info.canada@ottobock.com

Telephone: (800) 665-3327

Telefax: (800) 463-3659

Department responsible for information:

Mark Agro, Telephone: (800) 665-3327 (9 am - 5 pm)

Additional information:

Corporate headquarters:
Ottobock SE & Co. KGaA
Max-Näder-Straße 15
Duderstadt
Germany

Emergency phone number

COLLECT, Telephone: (613) 996-6666

Transport:

CONSULTANK Lutz Harder GmbH (Contract QUALI003)

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

2. Hazards identification

Emergency overview

Appearance: Physical state at 20 °C and 101.3 kPa: liquid

Color: yellowish

Odor: ester-like

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

Hazard symbols:



Signal word:

Danger

Hazard statements:

- Highly flammable liquid and vapor.
- Causes skin irritation.
- May cause an allergic skin reaction.
- Causes serious eye irritation.
- May cause drowsiness or dizziness.
- 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.
- Keep container tightly closed.
- Avoid breathing vapors.
- Contaminated work clothing should not be allowed out of the workplace.
- Avoid release to the environment.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Call a POISON CENTER/doctor if you feel unwell.
- If skin irritation or rash occurs: Get medical advice/attention.
- Wash contaminated clothing before reuse.
- 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) and WHMIS in Canada.

Hazards not otherwise classified

Potentially explosive mixtures may form if adequate ventilation is not provided.
Inhalation can lead to irritations of the respiratory tract and mucous membrane.
see section 11: Toxicological information

3. Composition / Information on ingredients

Chemical characterisation: Polychloroprene adhesive with modified synthetic resins and stabilizing agents in a mixture of organic solvent.

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 141-78-6	Ethyl acetate	20 - 35 %	Flammable Liquid 2. Eye Irritation 2A. Specific Target Organ Toxicity (Single Exposure) 3.
CAS 64742-49-0	Special petrol	20 - 30 %	Flammable Liquid 2. Germ cell mutagenicity 1B. Carcinogenicity 1B. Specific Target Organ Toxicity (Single Exposure) 3. Aspiration Toxicity 1. Aquatic toxicity - chronic 2.
CAS 110-82-7	Cyclohexane	20 - 30 %	Flammable Liquid 2. Skin Irritation 2. Specific Target Organ Toxicity (Single Exposure) 3. Aspiration Toxicity 1. Aquatic toxicity - acute 1 (M-factor = 1). Aquatic toxicity - chronic 1 (M-factor = 1).
CAS 8050-09-7	Colophony	< 1 %	Sensitization - skin 1.

4. First aid measures

In case of inhalation:	Seek medical attention. Move victim to fresh air; if necessary, provide artificial respiration or oxygen.
Following skin contact:	Take off immediately all contaminated clothing. After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Follow up by applying skin cream. In case of skin reactions, consult a physician.
After eye contact:	Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently consult an ophthalmologist.
After swallowing:	Rinse mouth immediately and drink plenty of water. Do not induce vomiting. Immediately get medical attention.

Most important symptoms and effects, both acute and delayed

May cause drowsiness or dizziness. Causes skin irritation. Causes serious eye irritation. Inhaling can lead to irritations of the respiratory tract and mucous membrane. Allergic reactions.

Information to physician

Treat symptomatically. Position and transport victim on their side. In case of respiratory distress, bring into semi-upright, seated position.

5. Fire fighting measures

Flash point/flash point range:

-18 °C (DIN 51755)

Auto-ignition temperature: No data available

Suitable extinguishing media:

carbon dioxide, Foam, extinguishing powder, Alcohol resistant foam, sand, water spray jet.

Extinguishing media which must not be used for safety reasons:

Full water jet

Specific hazards arising from the chemical

Highly flammable liquid and vapor. Vapors may form explosive mixtures with air.

In case of fire may be liberated: Hydrogen chloride, carbon black, carbon monoxide and carbon dioxide.

Special protective equipment and precautions for fire-fighters:

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information:

Heating will lead to pressure increase: Danger of bursting and explosion. Use fine water spray to cool endangered containers.

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

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Do not allow fire water to penetrate into surface or ground water.

Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

6. Accidental release measures

Personal precautions:	<p>Do not breathe vapors. Avoid contact with the substance.</p> <p>Eliminate all ignition sources if safe to do so. Provide adequate ventilation.</p> <p>Wear appropriate protective equipment. Keep unprotected people away.</p> <p>Cordon off downwind area at risk and warn inhabitants.</p>
Environmental precautions:	<p>Do not allow to enter into ground-water, surface water or drains. Danger of explosion!</p> <p>In case of release, notify competent authorities.</p>
Methods for clean-up:	<p>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).</p> <p>Beware of reignition. Thoroughly clean surrounding area.</p> <p>In case of greater quantities: Collect mechanically (use only explosion-proof equipment when pumping out).</p>
Additional information:	<p>Use explosion-proof equipment and non-sparking tools/utensils.</p>

7. Handling and storage

Handling

Advices on safe handling:	<p>Make sure there is sufficient air exchange and / or that working rooms are air suctioned.</p> <p>Do not breathe vapors.</p> <p>Avoid contact with skin and eyes.</p> <p>Do not allow containers to stand open. Wear appropriate protective equipment. Guarantee sufficient ventilation during and after use, in order to prevent vapour accumulation.</p>
Precautions against fire and explosion:	<p>Keep away from sources of ignition - No smoking.</p> <p>Take precautionary measures against static discharges.</p> <p>Use only explosion-protected equipment/instruments. Do not weld.</p> <p>In partially filled containers explosive mixtures may form.</p>

Storage

Requirements for storerooms and containers:	<p>Keep containers tightly closed and at a temperature between 15 °C and 30 °C. Keep only in the original container in a cool, well-ventilated place.</p> <p>Protect from frost, heat and sunlight.</p>
Hints on joint storage:	<p>Do not store together with combustible or self-igniting materials or any highly flammable solids.</p> <p>Keep away from food, drink and animal feedingstuffs.</p> <p>Do not store together with oxidizing agents or strong acids.</p>

8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
141-78-6	Ethyl acetate	Canada: OEL 8 hour	1,440 mg/m ³ ; 400 ppm
		Canada: OEL TWA	150 ppm
		Canada: VEMP	1,440 mg/m ³ ; 400 ppm
		USA: ACGIH: TWA	1,440 mg/m ³ ; 400 ppm
		USA: IDLH: TWA	2,000 ppm [10% LEL]
		USA: NIOSH: TWA	1,400 mg/m ³ ; 400 ppm
		USA: OSHA: TWA	1,400 mg/m ³ ; 400 ppm
64742-49-0	Special petrol	Canada: OEL TWA	100 ppm
110-82-7	Cyclohexane	Canada: OEL 8 hour	344 mg/m ³ ; 100 ppm
		Canada: OEL TWA	100 ppm
		Canada: VEMP	1,030 mg/m ³ ; 300 ppm
		USA: ACGIH: TWA	344 mg/m ³ ; 100 ppm
		USA: IDLH: TWA	1,300 ppm [10% LEL]
		USA: NIOSH: TWA	1,050 mg/m ³ ; 300 ppm
		USA: OSHA: TWA	1,050 mg/m ³ ; 300 ppm
8050-09-7	Colophony	Canada: OEL TWA	0.001 mg/m ³ (inhalable fraction)
		Canada: VEMP	0.001 mg/m ³ (Aerosol, inhalable fraction)

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

Engineering controls

Provide for good ventilation or exhaust system or work with completely self-contained equipment.

Take precautionary measures against static discharges.

See also information in chapter 7, section storage.

Personal protection equipment (PPE)

Eye/face protection: goggles.

Skin protection: Flame retardant, antistatic and chemical resistant protective clothing.

Protective gloves according to OSHA Standard - 29 CFR: 1910.138.

Glove material: butyl caoutchouc (butyl rubber)-Layer thickness: 0.5 mm

Breakthrough time >60 min

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

Respiratory protection: Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded. Use filter type A-P2 according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2..

General hygiene considerations:

Use only non-sparking tools. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

Do not breathe vapor/aerosol. Avoid contact with skin and eyes.

Take off immediately all contaminated clothing.

When using do not eat, drink or smoke.

Wash hands before breaks and after work.

Environmental exposure controls

Refer to 6.: Section "Environmental precautions".

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance:	Physical state at 20 °C and 101.3 kPa: liquid Color: yellowish
Odor:	ester-like
Odor threshold:	No data available
pH:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	65 °C (DIN 53171)
Flash point/flash point range:	-18 °C (DIN 51755)
Evaporation rate:	No data available
Flammability:	Highly flammable liquid and vapor.
Explosion limits:	LEL (Lower Explosion Limit): 1.00 Vol-% UEL (Upper Explosive Limit): 11.50 Vol-%
Vapor pressure:	at 20 °C: 175 hPa (DIN EN 12) at 50 °C: 950 hPa
Vapor density:	No data available
Density:	at 20 °C: 0.82 g/mL (DIN 51757)
Water solubility:	insoluble
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Thermal decomposition:	>150 °C
Viscosity, dynamic:	at 20 °C: 1,200 - 3,000 mPa*s (DIN 51550)
Explosive properties:	Vapors may form explosive mixtures with air.
Ignition temperature:	200 °C (DIN 51794)
Solvent content:	78.3 %
Solid content:	21.7 %
Additional information:	solvent separation test: < 0,1 % flow time (20°C): > 300 (6mm)

10. Stability and reactivity

Reactivity:	Highly flammable liquid and vapor. Vapors may form explosive mixtures with air.
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Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: Heating will lead to pressure increase: Danger of bursting and explosion.

Conditions to avoid: Avoid contact with air/oxygen.
Keep away from heat sources, sparks and open flames.
Protect from direct sunlight.

Incompatible materials: Exothermic reactions with oxidizing agents, strong acids.

Hazardous decomposition products: In case of fire may be liberated: HCl, carbon monoxide and carbon dioxide

Thermal decomposition: >150 °C

11. Toxicological information

Toxicological tests

Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

Acute toxicity (oral): Based on available data, the classification criteria are not met.

Acute toxicity (dermal): Based on available data, the classification criteria are not met.

Acute toxicity (inhalative): Based on available data, the classification criteria are not met.

Skin corrosion/irritation: Skin Irritation 2 = Causes skin irritation.

Serious eye damage/irritation: Eye Irritation 2A = Causes serious eye irritation.

Sensitisation to the respiratory tract: Based on available data, the classification criteria are not met. Information about Colophony: May cause sensitization by inhalation.

Skin sensitisation: Sensitization - skin 1 = May cause an allergic skin reaction.

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

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

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

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Specific Target Organ Toxicity (Single Exposure) 3 = May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure): Lack of data.

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

Other information:

Information about Ethyl acetate:

LD50 Rat, oral: 5600 mg/kg.

LD50 Rabbit, dermal: 18000 mg/kg.

LC50 Rat, inhalative: 58 mg/l/4h (vapor).

Information about Naphtha (petroleum), hydrotreated light:

LD50 Rat, oral: 5000 mg/kg.

LD50 Rabbit, dermal: 3160 mg/kg.

LC50 Rat, inhalative: 25 mg/l/4h (vapor).

Information about Cyclohexane:

LD50 Rat, oral: 12705 mg/kg.

LD50 Rabbit, dermal: 2000 mg/kg.

LC50 Rat, inhalative: 20 mg/l/4h (vapor).

Information about Colophony:

LD50 Rat, oral: 2000 mg/kg.

LD50 Rabbit, dermal: 2000 mg/kg.

Symptoms

May cause drowsiness or dizziness. Causes skin irritation. Causes serious eye irritation. Inhaling can lead to irritations of the respiratory tract and mucous membrane. Allergic reactions.

12. Ecological information

Ecotoxicity

Aquatic toxicity:

Toxic to aquatic life with long lasting effects.

Information about Ethyl acetate:

Fish toxicity: LC50: 230 mg/L/96h.

Algae toxicity: ErC50: 3300 mg/L/72h .

Daphnia toxicity: EC50: 717 mg/L/48h.

Information about Naphtha (petroleum), hydrotreated light:

Fish toxicity: LC50: 10 mg/L/96h.

Algae toxicity: ErC50: 10 mg/L/72h .

Daphnia toxicity: EC50: 10 mg/L/48h.

Information about Cyclohexane:

Fish toxicity: LC50: 55 mg/L/96h.

Algae toxicity: ErC50: 500 mg/L/72h .

Daphnia toxicity: EC50: 0,9 mg/L/48h.

Mobility in soil

No data available

Persistence and degradability

Further details:

Information about Ethyl acetate

Partition coefficient: n-octanol/water (log pOW) / Method: 0.6

Bioconcentration factor (BCF): 30

Information about Naphtha (petroleum), hydrotreated light

Partition coefficient: n-octanol/water (log pOW) / Method: 4 - 5

Information about Cyclohexane

Partition coefficient: n-octanol/water (log pOW) / Method: 3.4

Product is not readily biodegradable. (OECD)

Additional ecological information

Volatile organic compounds (VOC):

100 % by weight / 820 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.
Handle contaminated packages in the same way as the substance itself.
Non-contaminated packages may be recycled. Handle empty containers with care.
Incineration may cause explosion.

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 (ethyl acetate and cyclohexane), 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:

III

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: III
 Labels: 3
 Special Provisions: B1, B52, IB3, T2, TP1
 Packaging – Exceptions: 150
 Packaging – Non-bulk: 173
 Packaging – Bulk: 242
 Quantity limitations – Passenger aircraft / rail: 60 L
 Quantity limitations – Cargo only: 220 L
 Vessel stowage – Location: A
 Vessel stowage – Other:



Canada: Transportation of Dangerous Goods (TDG)

UN Number: UN1133
 Shipping name: UN 1133, adhesives
 TDG class: 3
 Packing group: III
 Explosive limit and limited quantity index: 5L
 Passenger carrying road or rail index: 60L

Sea transport (IMDG)

UN number: UN 1133
 Proper shipping name: UN 1133, ADHESIVES (ethyl acetate and cyclohexane), MARINE POLLUTANT
 Class or division, Subsidiary risk: Class 3, Subrisk -
 Packing Group: III
 EmS: F-E, S-D
 Special Provisions: 223 955
 Limited quantities: 5 L
 Excepted quantities: E1
 Package - Instructions: P001, LP01
 Package - Provisions: PP1
 IBC - Instructions: IBC03
 IBC - Provisions: -
 Tank instructions - IMO: -
 Tank instructions - UN: T2
 Tank instructions - Provisions: TP1
 Stowage and handling: Category A.
 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:	III
Hazard label:	Flamm. liquid
Excepted Quantity Code:	E1
Passenger and Cargo Aircraft: Ltd.Qty.:	Pack.Instr. Y344 - Max. Net Qty/Pkg. 10 L
Passenger and Cargo Aircraft:	Pack.Instr. 355 - Max. Net Qty/Pkg. 60 L
Cargo Aircraft only:	Pack.Instr. 366 - Max. Net Qty/Pkg. 220 L
Special Provisions:	A3
Emergency Response Guide-Code (ERG):	3L

15. Regulatory information

National regulations - Canada

Ethyl acetate:	DSL: listed
Special petrol:	DSL: listed
Cyclohexane:	DSL: listed
Colophony:	DSL: listed

National regulations - U.S. Federal Regulations

Ethyl acetate:	<p>TSCA Inventory: listed</p> <p>Other Environmental Laws:</p> <p>CERCLA: RQ 5000 lbs.</p> <p>RCRA Hazardous Wastes: Code U112</p> <p>NIOSH Recommendations:</p> <p>Occupational Health Guideline: 0260</p>
Special petrol:	TSCA Inventory: listed; UVCB
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>
Colophony:	TSCA Inventory: listed; UVCB

National regulations - U.S. State Regulations

Ethyl acetate:	<p>Delaware Air Quality Management List: DRQ: 5000 - RQ State: Federal Regulations Apply</p> <p>Idaho Air Pollutant List: Title 585: AAC: 70 - EL: 93,3 - OEL: 1400 - Title 586: -</p> <p>Main Hazardous Air Pollutants: Me 2005: HAP - Hap Rpt: 20000</p> <p>Massachusetts Haz. Substance codes: 2,4,5,6 F8</p> <p>Minnesota Haz. Substance: Codes: AO - Ratings: 6.83 - 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: 400 ppm - 1400 mg</p>
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>

16. Other information

Text for labeling: Contains 20 - 35 % Ethyl acetate, 20 - 30 % Special petrol, 20 - 30 % Cyclohexane, < 1 % Colophony.

Hazard rating systems: Contains: Ethyl acetate, Cyclohexane.



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
 BCF: Bioconcentration Factor
 Carcinogenicity: Carcinogenicity
 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
 EC50: Effective Concentration 50%
 EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods
 EN: European Standard
 EQ: Excepted quantities
 ErC50: EC50 in terms of reduction of growth rate
 Eye Irritation: Eye irritation
 Flammable Liquid: Flammable liquid
 Germ cell mutagenicity: Mutagenicity
 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
 LC50: Median lethal concentration
 LD50: Lethal dose 50%
 LEL: Lower Explosion Limit
 log P(o/w): Partition coefficient: octanol/water
 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
 RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
 Sensitization - skin: Skin sensitisation
 Skin Irritation: Skin irritation
 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
 WHMIS: Workplace Hazardous Materials Information System

Reason of change: Changes in section 8: Occupational exposure limit values
 Changes in section 8: Occupational exposure limit values
 Changes in section 8: Biological Limit Value

Date of first version: 29/4/2016

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.