

## 1. Identification

### Product identifier

Trade name: 636K42 - Lacquer sealer black

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

General use: Special varnish, Coating solution. For orthopedic procedures.  
For use in industrial installations and professional treatment only.

### Details of the supplier of the safety data sheet

Company name: Otto Bock Health Care  
Street/POB-No.: 3820 W. Great Lakes Drive  
Zip code, city: Salt Lake City, UT 84120  
USA

WWW: [www.ottobockus.com](http://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](mailto:USRegulatory@ottobock.com)

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

### Emergency telephone 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. Hazard identification

### Classification of the substance or mixture

Flammable Liquid - Category 2

Highly flammable liquid and vapor.

Eye Irritation - Category 2

Causes serious eye irritation.

Specific Target Organ Toxicity (Single Exposure) - Category 3 May cause drowsiness or dizziness.

### Label elements

Symbols:



Signal word: **Danger**

Hazard statements: Highly flammable liquid and vapor.  
Causes serious eye irritation.  
May cause drowsiness or dizziness.

### Precautionary statements:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Avoid breathing mist/vapors/spray.

Wear protective gloves/protective clothing/eye 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.

### Other hazards

On contact with air, potentially explosive mixtures may develop.

Inhaling can lead to irritations of the respiratory tract and mucous membrane.

Higher doses may have a narcotic effect.

## 3. Composition/information on ingredients

### Mixtures

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 141-78-6	Ethyl acetate	80 - 85 %	Flammable Liquid - Category 2. Eye Irritation - Category 2A. Specific Target Organ Toxicity (Single Exposure) - Category 3.
CAS -	Nitrocellulose chips ESO 20%	10 - 25 %	Flammable Solid - Category 1.
CAS 1330-20-7	Xylene (isomeric mixture)	0 - 2.5 %	Flammable Liquid - Category 3. Acute Toxicity - dermal - Category 4. Acute Toxicity - inhalative - Category 4. Skin Irritation - Category 2.
CAS 123-86-4	n-Butyl acetate	0 - 2.5 %	Flammable Liquid - Category 3. Specific Target Organ Toxicity (Single Exposure) - Category 3.
CAS 100-41-4	Ethylbenzene	0 - 2.5 %	Flammable Liquid - Category 2. Acute Toxicity - inhalative - Category 4. Specific Target Organ Toxicity (Repeated Exposure) - Category 2. Aspiration Toxicity - Category 1.

The actual concentration or concentration range is withheld as a trade secret.

## 4. First aid measures

General information: If medical advice is needed, have product container or label at hand.

In case of inhalation: Move victim to fresh air, put at rest and loosen restrictive clothing.  
If breathing becomes irregular or ceases, apply rescue breathing or artificial respiration immediately, where required supply oxygen. Immediately get medical attention.

Following skin contact:	Remove residues with soap and water. Take off contaminated clothing and wash it before reuse. 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. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently consult an ophthalmologist.
After swallowing:	Do not induce vomiting. Danger of aspiration! Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Keep airway open. Immediately get medical attention.

### Most important symptoms/effects, acute and delayed

May cause drowsiness or dizziness. Causes serious eye irritation. Prolonged/repetitive skin contact may cause skin defatting or dermatitis.  
In case of inhalation: Vapors irritate mucous membranes and respiratory system.  
In case of ingestion: Aspiration of this product into the lungs during vomiting, may cause serious injury or death.  
Ethyl acetate:  
After resorption: sore throat, loss of appetite, headache, fatigue, drowsiness. Nausea, vomiting, breathing paralysis.  
Higher doses may have a narcotic effect.

### Information to physician

Treat symptomatically.

## 5. Fire-fighting measures

### Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:

Water spray jet, alcohol resistant 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

Highly flammable liquid and vapor.  
Liquid evaporates very quickly.  
Concentrated vapors are heavier than air. Explosive mixtures with air may even form at room temperature. Beware of reignition.  
In case of fire may be liberated: Carbon monoxide and carbon dioxide.

### Protective equipment and precautions for firefighters

Wear self-contained breathing apparatus.

Additional information:

Move container away or cool with water from a protected position.  
Use water spray jet to knock down vapors.  
Do not allow fire water to penetrate into surface or ground water.  
In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Eliminate all ignition sources if safe to do so. If possible, eliminate leakage.  
 Avoid contact with the substance.  
 Wear appropriate protective equipment. Keep unprotected people away.  
 Provide adequate ventilation. Avoid breathing mist/vapors/spray. Take off contaminated clothing and wash it before reuse.  
 Cordon off downwind area at risk and warn inhabitants.

#### Environmental precautions:

Do not empty into drains. Danger of explosion! In case of release, notify competent authorities.  
 Separation possible by separator.

### Methods and material for containment and cleaning up

Methods for clean-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).

#### Additional information:

Remove all sources of ignition.  
 Use only spark proof tools. Beware of reignition.  
 Special danger of slipping by leaking/spilling product.

## 7. Handling and storage

### Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed.  
 Concentrated vapors are heavier than air. Provide room air exhaust at ground level.  
 Avoid contact with skin and eyes. Avoid breathing mist/vapors/spray. Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.  
 Guarantee sufficient ventilation during and after use, in order to prevent vapor accumulation.  
 Have eye wash bottle or eye rinse ready at work place. When handling large quantities, supply emergency spray.

#### Precautions against fire and explosion:

Keep away from sources of ignition and heat.  
 Take precautionary measures against static discharges.  
 Beware of reignition. Air combined with vapors may form potentially explosive mixtures that are heavier than air. Do not weld. Use only spark proof tools. Use only explosion-proof equipment.

### Conditions for safe storage, including any incompatibilities

#### Requirements for storerooms and containers:

Keep container tightly closed in a cool, well-ventilated place.  
 Protect from heat and direct sunlight.  
 Store containers in upright position. Explosion protection required.

#### Hints on joint storage:

Do not store together with combustible or self-igniting materials or any highly flammable solids.

#### Further details:

Keep away from food, drink and animal feedingstuffs.  
 Attacks and dissolves many plastics.  
 Steel, stainless steel and aluminium are stable container materials.

## 8. Exposure controls/personal protection

### Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
141-78-6	Ethyl acetate	USA: ACGIH: STEL USA: ACGIH: TWA USA: IDLH: TWA USA: NIOSH: TWA USA: OSHA: TWA	200 ppm 100 ppm 2,000 ppm [10% LEL] 1,400 mg/m <sup>3</sup> ; 400 ppm 1,400 mg/m <sup>3</sup> ; 400 ppm
1330-20-7	Xylene (isomeric mixture)	USA: ACGIH: TWA USA: IDLH: TWA USA: NIOSH: STEL USA: NIOSH: TWA USA: OSHA: TWA	20 ppm 900 ppm 655 mg/m <sup>3</sup> ; 150 ppm 435 mg/m <sup>3</sup> ; 100 ppm 435 mg/m <sup>3</sup> ; 100 ppm
123-86-4	n-Butyl acetate	USA: ACGIH: STEL USA: ACGIH: TWA USA: IDLH: TWA USA: NIOSH: STEL USA: NIOSH: TWA USA: OSHA: TWA	150 ppm 50 ppm 1,700 ppm 950 mg/m <sup>3</sup> ; 200 ppm 710 mg/m <sup>3</sup> ; 150 ppm 710 mg/m <sup>3</sup> ; 150 ppm
100-41-4	Ethylbenzene	USA: ACGIH: TWA USA: IDLH: TWA USA: NIOSH: STEL USA: NIOSH: TWA USA: OSHA: TWA	87 mg/m <sup>3</sup> ; 20 ppm 800 ppm [10% LEL] 545 mg/m <sup>3</sup> ; 125 ppm 435 mg/m <sup>3</sup> ; 100 ppm 435 mg/m <sup>3</sup> ; 100 ppm

Biological limit values:

CAS No.	Designation	Type	Limit value	Parameter	Sampling
1330-20-7	Xylene (isomeric mixture)	USA: ACGIH-BEI, urine	0.3 g/g creatinine	Methylhippuric acids in ur	end of exposure or end of shift
100-41-4	Ethylbenzene	USA: ACGIH-BEI, urine	150 mg/g creatinine	Sum of mandelic acid and phenylglyoxylic acid in urine	end of exposure or end of shift

### Appropriate engineering controls

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

### Personal protection equipment (PPE)

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

Hand protection:	Protective gloves according to OSHA Standard - 29 CFR: 1910.138. Glove material: Butyl caoutchouc (butyl rubber) - Layer thickness: >= 0,5 mm Breakthrough time >480 min Observe glove manufacturer's instructions concerning penetrability and breakthrough time. Unsuitable materials: natural rubber, nitrile rubber, fluoro rubber.
Eye protection:	Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.
Body protection:	Wear suitable protective clothing and shoes. Recommendation: Flame-retardant protective clothing, antistatic.
General hygiene considerations:	Avoid breathing mist/vapors/spray. Take off contaminated clothing and wash it before reuse. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Guarantee sufficient ventilation during and after use, in order to prevent vapor accumulation. Have eye wash bottle or eye rinse ready at work place. When handling large quantities, supply emergency spray.

### Environmental exposure controls

Refer to 6.: Section "Environmental precautions".

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

Physical state at 68 °F and 101.3 kPa	liquid
Color:	Form: pasty black
Odor:	like acetone
Odor threshold:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	170.6 - 172.4 °F
Flammability:	Highly flammable liquid and vapor.
Explosion limits:	LEL (Lower Explosion Limit): 2.10 Vol-% UEL (Upper Explosive Limit): 11.50 Vol-%
Flash point/flash point range:	24.8 °F
Evaporation rate:	No data available
Auto-ignition temperature:	not self-igniting
Decomposition temperature:	No data available
pH:	No data available
Dynamic viscosity:	at 68 °F: 50,000 mPa*s
Viscosity, kinematic:	not determined
Water solubility:	completely miscible
Partition coefficient: n-octanol/water:	No data available
Vapor pressure:	at 68 °F: 97 hPa
Density:	not determined
Vapor density:	No data available
Particle characteristics:	Not applicable

### Additional information

Explosive properties:	Product is not explosive. On contact with air, potentially explosive mixtures may develop.
Ignition temperature:	860 °F
Solvent content:	80 %
Solid content:	19.5 - 20.9 %

## 10. Stability and reactivity

Reactivity:	Highly flammable liquid and vapor. Vapors may form explosive mixtures with air.
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:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from heat and direct sunlight. Liquid evaporates very quickly.
Incompatible materials:	No data available
Hazardous decomposition products:	No hazardous decomposition products when regulations for storage and handling are observed.

## 11. Toxicological information

### Information on toxicological effects

**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): Lack of data.

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

ATEmix: > 5,000

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

ATEmix: > 50 mg/L

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Repeated exposure may cause skin dryness or cracking.

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

Sensitisation to the respiratory tract: Based on available data, the classification criteria are not met.

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

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) - Category 3 = May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure): Based on available data, the classification criteria are not met.

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

**Other information:**

Information about Ethyl acetate:

LD50 Rabbit, oral: 4,934 mg/kg

LD50 Rabbit, dermal: > 5,000 mg/kg

LC50 Rat, inhalative (vapor): > 20 mg/L/6h

Information about Xylene:

LD50 Rat, oral: 3,523 mg/kg

LD50 Rabbit, dermal: > 5,000 mg/kg

LC50 Rat, inhalative (vapor): > 27 mg/L/4h

Information about n-Butyl acetate:

LD50 Rat, oral: > 5,000 mg/kg (OECD 423)

LD50 Rabbit, dermal: > 5,000 mg/kg (OECD 402)

Information about Ethylbenzene:

LD50 Rat, oral: 3,500 mg/kg

LD50 Rabbit, dermal: > 5,000 mg/kg

LC50 Rat, inhalative (vapor): > 17 mg/L/4h



### Symptoms

Ethyl acetate:

After resorption: sore throat, loss of appetite, headache, fatigue, drowsiness. Nausea, vomiting, breathing paralysis.

Higher doses may have a narcotic effect.

In case of inhalation: Vapors irritate mucous membranes and respiratory system.

In case of ingestion:

Aspiration of this product into the lungs during vomiting, may cause serious injury or death.

After contact with skin:

Prolonged/repetitive skin contact may cause skin defatting or dermatitis.

After eye contact: Upon direct contact with eyes may cause burning, tearing, redness.

## 12. Ecological information

### Ecotoxicity

Aquatic toxicity:

Information about Ethyl acetate:

Fish toxicity:

LC50 Pimephales promelas (fathead minnow): 230 mg/L/96h

Daphnia toxicity:

EC50 Daphnia Cucullata: 165 mg/L/48h

Algae toxicity:

EC50 Desmodesmus subspicatus (green algae): 5,600 mg/L/48h

Effects in sewage plants:

Information about Ethyl acetate:

Technically correct releases of minimal concentrations to adapted biological sewage treatment facility, will not disturb the biodegradability of activated sludge.

### Persistence and degradability

Further details:

Information about Ethyl acetate:

Biodegradation: 100 %/28 d (OECD 301 D)

Bioconcentration factor (BCF): 30 (Leuciscus idus)

Product is readily biodegradable.

### Bioaccumulative potential

Partition coefficient: n-octanol/water:

No data available

### Mobility in soil

No data available

### Other adverse effects

Oxygen demand:

ThOD: (Ethyl acetate) 1,82 g/g

General information:

Do not allow to enter into ground-water, surface water or drains.

### 13. Disposal considerations

#### Waste treatment methods

##### Product

Recommendation: Incinerate as hazardous waste according to applicable local, state, and federal regulations.  
Do not dispose of with household waste.  
Do not empty into drains.

##### Package

Recommendation: Dispose of waste according to applicable legislation.  
Non-contaminated packages may be recycled.  
Handle empty containers with care. Incineration may cause explosion.

### 14. Transport information

#### UN number

DOT: UN1993  
IMDG, IATA-DGR: UN 1993

#### UN proper shipping name

DOT: UN 1993, FLAMMABLE LIQUIDS, N.O.S. (Ethyl acetate)  
IMDG, IATA-DGR: UN 1993, FLAMMABLE LIQUID, N.O.S. (Ethyl acetate)

#### Transport hazard class(es)

DOT: 3  
IMDG: Class 3, Subrisk -  
IATA-DGR: Class 3



#### Packing group

DOT, IMDG, IATA-DGR: II

#### Environmental hazards

Marine pollutant: no

#### Transport in bulk according to IMO instruments

No data available

#### Special precautions for user

##### USA: Department of Transportation (DOT)

Labels: 3  
Symbols: G  
Special Provisions: IB2, T7, TP1, TP8, TP28  
Packaging – Exceptions: 150  
Packaging – Non-bulk: 202  
Packaging – Bulk: 242  
Quantity limitations – Passenger aircraft / rail: 5 L  
Quantity limitations – Cargo only: 60 L  
Vessel stowage – Location: B

### Sea transport (IMDG)

EmS:	F-E, S-E
Special Provisions:	274
Limited quantities:	1 L
Excepted quantities:	E2
Package - Instructions:	P001
Package - Provisions:	-
IBC - Instructions:	IBC02
IBC - Provisions:	-
Tank instructions - IMO:	-
Tank instructions - UN:	T7
Tank instructions - Provisions:	TP1, TP8, TP28
Stowage and handling:	Category B.
Properties and observations:	-
Marine pollutant:	no
Segregation group:	none
Remarks:	For packages < = 450 litres: PG III (IMDG 2.3.2.2)

### Air transport (IATA)

Proper shipping name:	UN 1993, FLAMMABLE LIQUID, N.O.S. (Ethyl acetate)
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):	3H
Remarks:	For packages < = 100 litres: PG III (IATA 3.2.2)

### 15. Regulatory information

#### 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>NIOSH Recommendations:</p> <p>Occupational Health Guideline: 0260</p>
Xylene (isomeric mixture):	<p>TSCA Inventory: listed</p> <p>Carcinogen Status: IARC Rating: Group 3</p> <p>OSHA Carcinogen: not listed</p> <p>NTP Rating: not listed</p> <p>Clean Air Act:</p> <p>CAA Hazardous Air Pollutants: yes</p> <p>CAA SOCM Chemical: yes</p> <p>Clean Water Act:</p> <p>CWA Hazardous Substances: Category B; RQ 100.0 lbs</p> <p>Other Environmental Laws:</p> <p>CERCLA: RQ 100 lbs.</p> <p>SARA Title III, Section 313, Toxic Release: NPFAS; De Minimis &lt;=1.0 %;</p> <p>Thresholds 25000/10000 lbs</p>
n-Butyl acetate:	<p>TSCA Inventory: listed</p> <p>Clean Water Act:</p> <p>CWA Hazardous Substances: Category D; RQ 5000.0 lbs</p> <p>Other Environmental Laws:</p> <p>CERCLA: RQ 5000 lbs.</p> <p>NIOSH Recommendations:</p> <p>Occupational Health Guideline: 0072</p>
Ethylbenzene:	<p>TSCA Inventory: listed</p> <p>Carcinogen Status: IARC Rating: Group 2B</p> <p>OSHA Carcinogen: not listed</p> <p>NTP Rating: not listed</p> <p>Clean Air Act:</p> <p>CAA Hazardous Air Pollutants: yes</p> <p>CAA SOCM Chemical: yes</p> <p>Clean Water Act:</p> <p>CWA Hazardous Substances: Category C; RQ 1000.0 lbs</p> <p>CWA Priority Pollutants: listed</p> <p>Other Environmental Laws:</p> <p>CERCLA: RQ 1000 lbs.</p> <p>RCRA Groundwater Monitoring: listed</p> <p>SARA Title III, Section 313, Toxic Release: NPFAS; De Minimis &lt;=0.1 %;</p> <p>Thresholds 25000/10000 lbs</p> <p>NIOSH Recommendations:</p> <p>Occupational Health Guideline: 0264*</p>

## National regulations - U.S. State Regulations

Ethyl acetate:	New York Right-To-Know: listed
Xylene (isomeric mixture):	New York Right-To-Know: listed
n-Butyl acetate:	New York Right-To-Know: listed
Ethylbenzene:	California Proposition 65: cancer New York Right-To-Know: listed

## Further regulations, limitations and legal requirements

No data available

## 16. Other information

Text for labeling: Contains 80 - 85 % Ethyl acetate, 10 - 25 % Nitrocellulose chips ESO 20%, 0 - 2.5 % Xylene (isomeric mixture), 0 - 2.5 % n-Butyl acetate, 0 - 2.5 % Ethylbenzene.

Revision date: 3/3/2026

Date of first version: 5/24/2019

Reason of change: Changes in section 8: Biological Limit Value

Hazard rating systems:



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:

Acute Toxicity: Acute toxicity  
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road  
 AS/NZS: Australian Standards/New Zealand Standards  
 Aspiration Toxicity: Aspiration toxicity  
 ATEmix: Acute Toxicity Estimate of mixture  
 BCF: Bioconcentration Factor  
 CAS: Chemical Abstracts Service  
 CFR: Code of Federal Regulations  
 CLP: Classification, Labelling and Packaging  
 DMEL: Derived minimal effect level  
 DNEL: Derived no-effect level  
 DOT: Department of Transportation's Safety Regulations (USA)  
 EC: European Community  
 EC50: Effective Concentration 50%  
 EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods  
 EN: European Standard  
 EQ: Excepted quantities  
 Eye Irritation: Eye irritation  
 Flammable Liquid: Flammable liquid  
 Flammable Solid: Flammable solid  
 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  
 MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships  
 OECD: Organisation for Economic Co-operation and Development  
 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  
 Skin Irritation: Skin irritation  
 STOT RE: Specific target organ toxicity - repeated exposure  
 STOT SE: Specific target organ toxicity - single exposure  
 ThOD: Theoretical Oxygen Demand  
 TLV: Threshold Limit Value  
 TRGS: Technical Rules for Hazardous Substances  
 UN: United Nations  
 vPvB: Very persistent and very bioaccumulative  
 WEL: Workplace Exposure Limit

### 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.