

## 1. Product and company identification

### Product identifier

Trade name: 84P3 - Acryform Mono

This safety data sheet pertains to the following products:  
84P3 = Acryform Mono

### Recommended use and restrictions on use

General use: Acrylic monomer for orthopedic procedures,  
Use with 84A3 - Acryform Poly.  
Reserved for industrial and professional use.

### 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: Form: liquid  
Color: colorless, clear

Odor: ester-like

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

Hazard symbols:



Signal word:

**Danger**

Hazard statements:

- Highly flammable liquid and vapor.
- Causes skin irritation.
- May cause an allergic skin reaction.
- May cause respiratory irritation.

Precautionary statements:

- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Avoid breathing vapors.
- Use only outdoors or in a well-ventilated area.
- Wear protective gloves and eye protection.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- 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) and WHMIS in Canada.

## Hazards not otherwise classified

Vapors irritate eyes and respiratory system. Pulmonary edema is possible.  
High concentrations of vapor or inhalation for an extended period may lead to paralysis of the central nervous system.  
Potentially explosive mixtures may form if adequate ventilation is not provided.  
Special danger of slipping by leaking/spilling product.  
see section 11: Toxicological information

## 3. Composition / Information on ingredients

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 80-62-6	Methyl methacrylate	>= 89 %	Flammable Liquid 2. Skin Irritation 2. Sensitization - skin 1. Specific Target Organ Toxicity (Single Exposure) 3.
CAS 8012-95-1	Paraffin oil	10 %	not classified
CAS 3077-12-1	N,N-bis-(2-Hydroxyethyl)-p-toluidine	< 1 %	Acute Toxicity 4 (oral). Skin Irritation 2. Eye Damage 1.

## 4. First aid measures

General information: Do not allow victim to become chilled. Keep victim warm. In case of vomiting, lay at least head on side. If victim is at risk of losing consciousness, position and transport on their side.  
Always seek medical assistance if symptoms develop that are possibly due to exposure through skin or eye contact or through inhalation of fumes.

In case of inhalation: Move victim to fresh air; if necessary, provide artificial respiration or oxygen. Immediately get medical attention.

Following skin contact: After contact with skin, wash immediately with soap and plenty of water. Change contaminated clothing. Seek medical treatment in case of troubles.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult physician.

After swallowing: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

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

May cause respiratory irritation. Causes skin irritation.  
May cause an allergic skin reaction.  
The following symptoms may occur: Mucous membrane irritation, Cough and shortage of breath.  
High concentrations of vapor or inhalation for an extended period may lead to paralysis of the central nervous system. Pulmonary edema is possible.  
In case of prolonged or frequent exposure eye irritation may occur.

### Information to physician

Monitor breathing. Treat symptomatically.  
If spray contacts eyes, immediately and thoroughly flush eyes with water; profitable is the application of isotonic eye rinse. Seek the attention of an ophthalmologist immediately.  
On irritation of the respiratory system use an aerosol dispenser and treat with 5 doses of dexamethasone aerosol (e.g. Auxiloson, Thomae) every 10 minutes until symptoms cease.  
Estimated lethal dose: 30g

## 5. Fire fighting measures

Flash point/flash point range: 10 °C (c.c. DIN 51755)

Auto-ignition temperature: No data available

Suitable extinguishing media: Water spray jet, carbon dioxide, foam, extinguishing powder

Extinguishing media which must not be used for safety reasons: strong water jet

### Specific hazards arising from the chemical

Highly flammable liquid and vapor. Flammable mixtures may form in the air when product is heated above the flash point and/or during spraying.  
Hazardous vapors may form during fires.

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.  
Cool endangered containers with water spray and, if possible, remove from danger zone.  
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:	<p>Eliminate all ignition sources if safe to do so. Provide adequate ventilation. Wear suitable protective clothing.</p> <p>When vapors form, use respiratory protection.</p> <p>Avoid contact with skin and eyes.</p> <p>Wear appropriate protective equipment. Avoid breathing vapors.</p> <p>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.</p> <p>Danger of explosion!</p> <p>In case of release, notify competent authorities.</p>
Methods for clean-up:	<p>Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents) and place in closed containers for disposal. Dispose of waste according to applicable legislation.</p>
Additional information:	<p>Take precautionary measures against static discharges.</p> <p>In case of handling larger quantities: Use explosion-proof equipment and non-sparking tools/utensils.</p> <p>Special danger of slipping by leaking/spilling product.</p>

## 7. Handling and storage

### Handling

Advices on safe handling:	<p>Only trained personnel may be allowed to enter storage area.</p> <p>Provide adequate ventilation, and local exhaust as needed. Do not breathe vapors.</p> <p>When using do not eat, drink or smoke. Wear appropriate protective equipment.</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>In case of fire, cool endangered containers with water.</p> <p>Flammable mixtures may form in the air when product is heated above the flash point and/or during spraying.</p> <p>Use only explosion-proof equipment. Do not weld.</p>

### Storage

Requirements for storerooms and containers:	<p>Keep container tightly closed in a cool, well-ventilated place. Keep container dry.</p>
Hints on joint storage:	<p>Do not store together with organic peroxides, ammonia or persulphates.</p> <p>Keep away from food, drink and animal feedingstuffs.</p>

## 8. Exposure controls / personal protection

### Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
80-62-6	Methyl methacrylate	Canada: OEL 15 min	410 mg/m <sup>3</sup> ; 100 ppm
		Canada: OEL 8 hour	205 mg/m <sup>3</sup> ; 50 ppm
		Canada: OEL STEL	100 ppm
		Canada: OEL TWA	50 ppm
		Canada: VECD	100 ppm
		Canada: VEMP	50 ppm
		USA: ACGIH: STEL	410 mg/m <sup>3</sup> ; 100 ppm
		USA: ACGIH: TWA	205 mg/m <sup>3</sup> ; 50 ppm
		USA: IDLH: TWA	1,000 ppm
		USA: NIOSH: TWA	410 mg/m <sup>3</sup> ; 100 ppm
		USA: OSHA: TWA	410 mg/m <sup>3</sup> ; 100 ppm
8012-95-1	Paraffin oil	Canada: OEL 15 min	10 mg/m <sup>3</sup> (Oil mist mineral)
		Canada: OEL 8 hour	5 mg/m <sup>3</sup> (Oil mist mineral)
		Canada: OEL TWA	0.2 mg/m <sup>3</sup> (Oil mist mineral)
		Canada: OEL TWA	1 mg/m <sup>3</sup>
			(Oil mist mineral, highly refined)
		Canada: VEMP	5 mg/m <sup>3</sup> (Oil mist mineral)
		USA: ACGIH: TWA	5 mg/m <sup>3</sup>
			(Oil mist mineral, inhalable fraction)
		USA: IDLH: TWA	2,500 mg/m <sup>3</sup>
		USA: NIOSH: STEL	10 mg/m <sup>3</sup>
		USA: NIOSH: TWA	5 mg/m <sup>3</sup>
		USA: OSHA: TWA	5 mg/m <sup>3</sup> (Oil mist mineral)

### Engineering controls

Provide good ventilation and/or an exhaust system in the work area. Do not allow containers to stand open.

Take precautionary measures against static discharges.

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.

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

Glove material: Butyl caoutchouc (butyl rubber)-Layer thickness: 0,7 mm

Breakthrough time: 480 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 (= against vapors of organic substances) according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.

General hygiene considerations:

Do not breathe vapors. Avoid contact with skin and eyes.

Take off immediately all contaminated clothing. Separate storage of work clothes.

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:	Form: liquid Color: colorless, clear
Odor:	ester-like
Odor threshold:	No data available
pH:	No data available
Melting point/freezing point:	-48 °C
Initial boiling point and boiling range:	103 °C
Flash point/flash point range:	10 °C (c.c. DIN 51755)
Evaporation rate:	No data available
Flammability:	Highly flammable liquid and vapor.
Explosion limits:	LEL (Lower Explosion Limit): 2.10 Vol-% UEL (Upper Explosive Limit): 12.50 Vol-%
Vapor pressure:	at 20 °C: 47 hPa
Vapor density:	No data available
Density:	at 20 °C: 0.943 g/mL
Water solubility:	at 20 °C: 1.6 g/L
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Thermal decomposition:	No data available
Viscosity, dynamic:	at 20 °C: 0.6 mPa*s
Explosive properties:	Not explosive. Vapors may form explosive mixtures with air.
Ignition temperature:	430 °C (DIN 51794)
Additional information:	Relative vapor density at 20 °C (air=1): >1 Odour threshold: 0,21 ppm

## 10. Stability and reactivity

Reactivity:	Highly flammable liquid and vapour..
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	Liquid evaporates quickly. 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. Ignition by hot surfaces, sparks and open flames. Container may explode if polymerization occurs.
Conditions to avoid:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Incompatible materials: Due to reducing substances, peroxides and heavy metal ions, polymerization with heat generation may occur.

Hazardous decomposition products:  
Hazardous vapors may form during fires.  
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: (Methyl methacrylate) 7,900 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 2 = Causes skin irritation.  
Serious eye damage/irritation: Lack of data.  
Sensitisation to the respiratory tract: Lack of data.  
Skin sensitisation: Sensitization - skin 1 = May cause an allergic skin reaction.  
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) 3 = May cause respiratory irritation.  
Specific target organ toxicity (repeated exposure): Lack of data.  
Aspiration hazard: Lack of data.

Other information:

No toxicological data is available for the product as such.

Following information applies to the component Methyl methacrylate:

LD50 Rat, oral: >5000 mg/kg

LC50 Rat, inhalative: 29,8 mg/l/4h

LD50 Rabbit, dermal: >5000 mg/kg

Skin irritation, Rabbit, 24h: Not an irritant (FDA, Draize).

Irritant effect on the eye: Rabbit: Not an irritant (Draize)

sensitization:

Sensitivity testing among guinea pigs with and without adjuvants afforded both positive and negative results.

May cause sensitization by skin contact. Varying incidences of allergic reactions have been observed in humans. (Symptoms: Headache, eye irritations, skin problems)

Mutagenicity:

not a mutagen (Dose 10000 µg/plate (Salmonella typhimurium, Ames-Test)

Mouse, Lymphoma L 5178 Y TK+/-Cells: mutagenic

CHO-Cells: Slight increase of the SCE (SCE-test)

No increase of the number of micronucleides under the following test conditions: OECD 474:

4520 mg/kg/Dose 1

1130 mg/kg/Dose 4

CD-1 Mouse, male, 6h/d, 5d: not a mutagen (Dominant letal Test)

Product did not show any carcinogenous, mutagenous or teratogenic effects in animal experiments. (Teratogenicity: Rat, inhalative: 2028 ppm, 6 - 15 d)

Chronic toxicity:

Rat, inhalative 250 - 1000 ppm (6h/d, 5d/w) exceeding 2a). Symptoms: Damage of the mucous membranes in nose, throat and lungs. Degeneration of olfactory epithelia.

Mouse, inhalative 500 - 1000 ppm (6h/d, 5d/w) exceeding 2a). Symptoms: Damage of the mucous membranes in nose, throat and lungs. Degeneration of olfactory epithelia.

Following information applies to the component ethyl triglycol methacrylate:

LD50 Rat, oral: >5000 mg/kg Stable under recommended storage conditions.

### Symptoms

In case of inhalation: Cough and shortage of breath.

In case of ingestion:

Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

After resorption of toxic quantities: CNS disorders, drowsiness, amyosthenia, coma, liver and kidney damage.

After eye contact: Mild irritant.



## 12. Ecological information

### Ecotoxicity

Aquatic toxicity: Harmful to aquatic organisms.

Following information applies to the component Methyl methacrylate:

Algae toxicity:  
EC3 Scenedesmus quadricauda: 37mg/L, 8d (DIN 38412 T.9)

Bacterial toxicity:  
EC0 Pseudomonas putida: 100 mg/L

Daphnia toxicity:  
EC50 Daphnia magna: 69mg/L, 48h (OECD 202/ISO 6341/EEC 84/449/V, C2)

Fish toxicity:  
LC50 Oncorhynchus mykiss: >79 mg/L/96h (OECD 203/ISO 7346/EEC 84/449/V, C1)  
NOEC Oncorhynchus mykiss: >40 mg/L/96h (OECD 203/ISO 7346/EEC 84/449/V, C1)

Further details: Do not allow to penetrate into soil, waterbodies or drains.

### Mobility in soil

No data available

### Persistence and degradability

Further details: Following information applies to the component Methyl methacrylate:

Product is readily biodegradable. (OECD 301 C, 14d: 94%)

Abiotic degradation:

Hydrolysis ( 25 °C, pH 7 ): half-life time (DT50): 53 months.

Hydrolysis ( 25 °C, pH 11 ): half-life time (DT50): 2.4 h.

Air (Photo-oxidation, OH-) half-life time (DT50): 6.99 h.

### Additional ecological information

Volatile organic compounds (VOC):  
> 89 % by weight

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

## 13. Disposal considerations

### Product

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

### Package

Recommendation: Waste key number:  
150102 Plastic container  
150104 Packages of metal

Dispose of waste according to applicable legislation.  
Handle contaminated packages in the same way as the substance itself.

## 14. Transport information

### UN number

ADR/RID, IMDG, IATA-DGR:  
UN 1247

### UN proper shipping name

ADR/RID, IMDG, IATA-DGR:

UN 1247, METHYL METHACRYLATE MONOMER, STABILIZED

### 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:

no

### 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:

UN1247

Proper shipping name:

UN 1247,  
METHYL METHACRYLATE MONOMER, STABILIZED

Hazard class or Division:

3

Packing Group:

II

Labels:

3

Special Provisions:

387, IB2, T4, TP1

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:

C

Vessel stowage – Other:

25, 40



### Canada: Transportation of Dangerous Goods (TDG)

UN Number:

UN1247

Shipping name:

UN 1247, METHYL METHACRYLATE MONOMER, STABILIZED

TDG class:

3

Packing group:

II

Special provisions:

155

Explosive limit and limited quantity index:

1L

Passenger carrying road or rail index:

5L

### Sea transport (IMDG)

UN number:	UN 1247
Proper shipping name::	UN 1247, METHYL METHACRYLATE MONOMER, STABILIZED
Class or division, Subsidiary risk:	Class 3, Subrisk -
Packing Group:	II
EmS:	F-E, S-D
Special Provisions:	386
Limited quantities:	1 L
Excepted quantities:	E2
Package - Instructions:	P001
Package - Provisions:	-
IBC - Instructions:	IBC02
IBC - Provisions:	-
Tank instructions - IMO:	-
Tank instructions - UN:	T4
Tank instructions - Provisions:	TP1
Stowage and handling:	Category C. SW1 SW2
Properties and observations:	Colourless, volatile liquid. Flashpoint: 8°C c.c. Explosive limits: 1.5% to 11.6%. Immiscible with water, Irritating to skin, eyes and mucous membranes.
Marine pollutant:	no
Segregation group:	none

### Air transport (IATA)

UN/ID number:	UN 1247
Proper shipping name::	UN 1247, METHYL METHACRYLATE MONOMER, STABILIZED
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:	A209
Emergency Response Guide-Code (ERG):	3L

## 15. Regulatory information

### National regulations - Canada

Methyl methacrylate:	DSL: listed
Paraffin oil:	DSL: listed
N,N-bis-(2-Hydroxyethyl)-p-toluidine:	DSL: listed

### National regulations - U.S. Federal Regulations

Methyl methacrylate:	<p>TSCA Inventory: listed</p> <p>Carcinogen Status:</p> <p>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: RQ 1000 lbs.</p> <p>Other Environmental Laws:</p> <p>CERCLA: RQ 1000 lbs.</p> <p>RCRA Hazardous Wastes: Code U162</p> <p>RCRA Groundwater Monitoring: Methods 8015, 8240 / PQL 2, 5</p> <p>SARA Title III - Section 313, Toxic Release: Conc. 1.0% / Threshold Standard</p> <p>NIOSH Recommendations:</p> <p>Occupational Health Guideline: 0426</p>
Paraffin oil:	<p>TSCA Inventory: listed; UVCB</p> <p>NIOSH Recommendations:</p> <p>Occupational Health Guideline: 0472</p>
N,N-bis-(2-Hydroxyethyl)-p-toluidine:	TSCA Inventory: listed

### National regulations - U.S. State Regulations

Methyl methacrylate:	<p>Delaware Air Quality Management List:</p> <p>DRQ: 1000 - RQ State: Federal Regulations Apply</p> <p>Idaho Air Pollutant List:</p> <p>Title 585; AAC: 20,5 - EL: 27,3 - OEL: 410 - Title 586: -</p> <p>Massachusetts Haz. Substance Codes: 2,4,5,6 F8 F9</p> <p>Main: HAP - 2000</p> <p>Minnesota Haz. Substance:</p> <p>Codes: AO - Ratings: 3.79 - Status: Air Pollutant. Title III. TRI.</p> <p>New Jersey RTK Hazardous Substance:</p> <p>DOT: 1247 - Sub No.: 1277</p> <p>New York List of Hazardous Substances:</p> <p>RQ-Air: 1000 - RQ-Land: 1</p> <p>No Note Associated with this chemical</p> <p>Pennsylvania Haz. Substance Code: E</p> <p>Washington Air Contaminant: TWA: 100 ppm = 410 mg</p>
Paraffin oil:	<p>California Proposition 65 code: not listed</p> <p>Massachusetts Haz. Substance codes: 2,4</p> <p>Minnesota Haz. Substance:</p> <p>Codes: A - Ratings: -- Status: Carcinogen.</p> <p>Washington Air Contaminant:</p> <p>TWA: 5 mg</p>

## 16. Other information

Text for labeling:

Contains  $\geq 89$  % Methyl methacrylate, 10 % Paraffin oil,  $< 1$  %

N,N-bis-(2-Hydroxyethyl)-p-toluidine.

Contains Methyl methacrylate.

Hazard rating systems:



NFPA Hazard Rating:

Health: 2 (Moderate)

Fire: 3 (Serious)

Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 2 (Moderate)

Flammability: 3 (Serious)

Physical Hazard: 0 (Minimal)

Personal Protection: X = Consult your supervisor

HEALTH	2
FLAMMABILITY	3
PHYSICAL HAZARD	0
	X

Abbreviations and acronyms:

Acute Toxicity: Acute toxicity

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

AS/NZS: Australian Standards/New Zealand Standards

CAS: Chemical Abstracts Service

CFR: Code of Federal Regulations

CLP: Classification, Labelling and Packaging

CNS: Central Nervous System

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 Damage: Eye damage

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

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

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

Date of first version:

15/5/1999

### 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.