JM One-Part Pourable Sealer

Version 3.0 | Revision Date 11/20/2023 | Print Date 11/20/2023

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Trade name	:	JM One-Part Pourable Sealer

Manufacturer or supplier's details

Company	:	Johns Manville
Address	:	P.O. Box 5108 Denver, CO USA 80217-5108
Telephone	:	+1-303-978-2000
Emergency telephone number	:	24-Hour Number: +1-800-424-9300 (CHEMTREC)
Company	:	Johns Manville Canada Inc.
Address	:	5301 42 Avenue Innisfail, AB Canada T4G 1A2
Telephone	:	+1-303-978-2000
Emergency telephone number	:	24-Hour Number: +1-800-424-9300 (CHEMTREC)

Recommended use of the chemical and restrictions on use

Recommended use	:	Sealant
Restrictions on use	:	For professional users only.
Prepared by	:	productsafety@jm.com

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200 and the Hazardous Products Regulations

Skin irritation	:	Category 2
Serious eye damage	:	Category 1
Skin sensitisation	:	Category 1
Germ cell mutagenicity	:	Category 2
Reproductive toxicity	:	Category 1B
Specific target organ toxicity - single exposure	:	Category 1 (thymus gland)
Specific target organ toxicity - repeated exposure (Oral)	:	Category 1 (thymus gland, Liver, Kidney)

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H341 Suspected of causing genetic defects.
H360 May damage fertility or the unborn child.
H370 Causes damage to organs (thymus gland).
H372 Causes damage to organs (thymus gland, Liver, Kidney) through prolonged or repeated exposure if swallowed.

Precautionary statements :

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mist or vapours.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

Mixture

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	>= 1 - <= 5
quartz (SiO2)	14808-60-7	>= 0.1 - <= 1
titanium dioxide	13463-67-7	>= 0.1 - <= 1
dibutylbis(pentane-2,4-dionato-O,O')tin	22673-19-4	>= 0.1 - <= 1

1,2-ethanediamine, N,N-bis[3-(trimethoxysilyl)propyl]-	74956-86-8	>= 0.1 - <= 1
phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)-	25973-55-1	>= 0.1 - <= 1

Actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Remove person to fresh air. If signs/symptoms continue, get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Call a physician if irritation develops or persists.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Protect unharmed eye.
If eye irritation persists, consult a specialist.

If swallowed : DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Gently wipe or rinse the inside of the mouth with water.
Never give anything by mouth to an unconscious person.
Get medical attention immediately.
If breathing is irregular or stopped, administer artificial respiration.

Most important symptoms and effects, both acute and delayed : Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.
Suspected of causing genetic defects.
May damage fertility or the unborn child.
Causes damage to organs.
Causes damage to organs through prolonged or repeated exposure if swallowed.

Protection of first-aiders : If potential for exposure exists refer to Section 8 for specific personal protective equipment.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Carbon dioxide (CO2)
Dry powder
Water spray
Alcohol-resistant foam

Unsuitable extinguishing media : High volume water jet

Hazardous combustion products : carbon oxides
nitrogen oxides
Silicon oxides
tin/tin oxides
titanium/titanium oxides

Further information : Standard procedure for chemical fires.

Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Advice on safe handling	:	Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Conditions for safe storage	:	Keep container tightly closed in a dry and well-ventilated place. Observe label precautions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
dibutylbis(pentane-2,4-dionato-O,O')tin	22673-19-4	TWA	0.1 mg/m3 (Tin)	OSHA
		TWA	0.1 mg/m3 (Tin)	ACGIH
		STEL	0.2 mg/m3 (Tin)	ACGIH
		TWA	0.1 mg/m3 (Tin)	CA AB OEL
		STEL	0.2 mg/m3 (Tin)	CA AB OEL
		TWAEV	0.1 mg/m3	CA QC OEL

			(Tin)	
		STEV	0.2 mg/m3 (Tin)	CA QC OEL
		TWA	0.1 mg/m3 (Tin)	CA BC OEL
		STEL	0.2 mg/m3 (Tin)	CA BC OEL
		TWA	0.1 mg/m3 (Tin)	CA ON OEL
		TWA	0.1 mg/m3 (Tin)	NIOSH REL
titanium dioxide	13463-67-7	TWA	10 mg/m3	CA AB OEL
		TWAEV (total dust)	10 mg/m3	CA QC OEL
		TWA (total dust)	15 mg/m3	OSHA
		TWA	10 mg/m3 (Titanium dioxide)	ACGIH
		TWA (Total dust)	10 mg/m3	CA BC OEL
		TWA (respirable dust fraction)	3 mg/m3	CA BC OEL
quartz (SiO2)	14808-60-7	TWA (Respirable particulates)	0.025 mg/m3	CA AB OEL
		TWA (Respirable fraction)	0.1 mg/m3	CA ON OEL
		TWAEV (respirable dust)	0.1 mg/m3	CA QC OEL
		TWA (Respirable particulate matter)	0.025 mg/m3	ACGIH
		TWA (respirable)	10 mg/m3 / %SiO2+2	OSHA
		TWA (respirable)	250 mppcf / %SiO2+5	OSHA
		TWA (Respirable dust)	0.05 mg/m3	NIOSH REL
		TWA (Respirable)	0.025 mg/m3	CA BC OEL
		TWA (Respirable)	0.025 mg/m3 (Silica)	CA BC OEL
		TWA (Respirable dust)	0.05 mg/m3	OSHA

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn.

		Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.
Hand protection		
Material	:	Protective gloves
Remarks	:	Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
Eye protection	:	Wear safety glasses with side shields or goggles. Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	:	Wear protective clothing, such as long-sleeved shirts and pants. Choose body protection according to the amount and concentration of the dangerous substance at the work place. Remove and wash contaminated clothing before re-use.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday. Written instructions for handling must be available at the work place.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	various, grey, white
Odour	:	mild
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	> 93 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit	:	Not applicable
Lower explosion limit	:	Not applicable
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	1.55
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-	:	No data available

octanol/water		
Auto-ignition temperature	:	No data available
Thermal decomposition	:	No data available
Viscosity		
Viscosity, dynamic	:	30,000 - 40,000 mPa.s
Viscosity, kinematic	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Stable at normal ambient temperature and pressure.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Exothermic reaction with strong acids. No decomposition if stored and applied as directed.
Conditions to avoid	:	Exposure to moisture
Incompatible materials	:	Strong acids

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate : > 10 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method

Components:

N-(3-(trimethoxysilyl)propyl)ethylenediamine:

Acute oral toxicity	:	LD50 (Rat, male and female): 2,295 mg/kg Method: OPPTS 870.1100 GLP: yes
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 1.49 - < 2.44 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OPPTS 870.1300 GLP: yes
Acute dermal toxicity	:	LD50 (Rabbit, male and female): > 2,000 mg/kg Method: OPPTS 870.1200 GLP: yes

quartz (SiO2):

Acute oral toxicity	:	LD50 (Rat): > 22,500 mg/kg
Acute inhalation toxicity	:	Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : Assessment: The substance or mixture has no acute dermal toxicity

titanium dioxide:
Acute oral toxicity : LD50 (Rat, male and female): > 2,000 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.09 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : Method: Expert judgement
Assessment: The substance or mixture has no acute dermal toxicity

dibutylbis(pentane-2,4-dionato-O,O')tin:
Acute oral toxicity : LD50 (Rat, female): 1,864 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: No data available

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402

phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)-:
Acute oral toxicity : LD50 (Rat, male and female): > 7,750 mg/kg
Method: OECD Test Guideline 401
GLP: no

Acute inhalation toxicity : LC50 (Rat, male and female): > 0.4 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: no
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Highest concentration available for testing.

Acute dermal toxicity : LD50 (Rabbit, male and female): > 1,100 mg/kg
Method: OECD Test Guideline 402
GLP: no
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: No mortality was observed.

Skin corrosion/irritation

Components:

N-(3-(trimethoxysilyl)propyl)ethylenediamine:
Species: Rabbit
Exposure time: 4 h
Method: OPPTS 870.2500
Result: Mild skin irritation
GLP: yes

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

Skin corrosion/irritation

dibutylbis(pentane-2,4-dionato-O,O')tin:
Species: Rat
Exposure time: 24 h
Method: OECD Test Guideline 402
Result: Corrosive, category 1C - where responses occur after exposures between 1 hour and 4 hours and observations up to 14 days.

Serious eye damage/eye irritation

Components:

N-(3-(trimethoxysilyl)propyl)ethylenediamine:
Species: Rabbit
Result: Irreversible effects on the eye
Method: OECD Test Guideline 405
GLP: yes

Serious eye damage/eye irritation

dibutylbis(pentane-2,4-dionato-O,O')tin:
Species: Rabbit
Result: Irreversible effects on the eye
Method: in vitro eye irritation test
Remarks: rabbit eye

Serious eye damage/eye irritation

1,2-ethanediamine, N,N-bis[3-(trimethoxysilyl)propyl]-:
Result: Irreversible effects on the eye

Respiratory or skin sensitisation

Components:

N-(3-(trimethoxysilyl)propyl)ethylenediamine:
Test Type: Maximisation Test
Exposure routes: Dermal
Species: Guinea pig
Method: OECD Test Guideline 406
Result: The product is a skin sensitiser, sub-category 1B.
GLP: yes

Respiratory or skin sensitisation

dibutylbis(pentane-2,4-dionato-O,O')tin:
Test Type: Maximisation Test
Species: Guinea pig
Assessment: May cause sensitisation by skin contact.
Method: OECD Test Guideline 406

Germ cell mutagenicity

Components:

dibutylbis(pentane-2,4-dionato-O,O')tin:
Germ cell mutagenicity- : Positive result(s) from in vivo somatic cell mutagenicity tests

Assessment	supported by positive results from in vitro mutagenicity assays or chemical structure activity relationship to known germ cell mutagens	
IARC	Group 1: Carcinogenic to humans	
	quartz (SiO2)	14808-60-7
	Group 2B: Possibly carcinogenic to humans	
	titanium dioxide	13463-67-7
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA (29 CFR 1910 Subpart Z, Toxic and Hazardous Substances).	
NTP	Known to be human carcinogen	
	quartz (SiO2)	14808-60-7

Reproductive toxicity

Components:

dibutylbis(pentane-2,4-dionato-O,O')tin:
Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments

STOT - single exposure

Components:

N-(3-(trimethoxysilyl)propyl)ethylenediamine:
Exposure routes: Inhalation
Target Organs: Respiratory system
Assessment: May cause respiratory irritation.

STOT - single exposure

dibutylbis(pentane-2,4-dionato-O,O')tin:
Target Organs: thymus gland
Assessment: Causes damage to organs.

STOT - repeated exposure

Components:

dibutylbis(pentane-2,4-dionato-O,O')tin:
Exposure routes: Ingestion
Target Organs: thymus gland
Assessment: Causes damage to organs through prolonged or repeated exposure.

STOT - repeated exposure

phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)-:
Exposure routes: Ingestion
Target Organs: Liver, Kidney
Assessment: May cause damage to organs through prolonged or repeated exposure.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

quartz (SiO2):

Toxicity to fish	:	LC50 (Cyprinus carpio (Carp)): > 10,000 mg/l Exposure time: 72 h

dibutylbis(pentane-2,4-dionato-O,O')tin:

Toxicity to fish	:	LC50 (Oryzias latipes (Japanese medaka)): > 2 mg/l Exposure time: 96 h Test Type: semi-static test Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.0036 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): 2 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity)	:	100
Toxicity to microorganisms	:	EC50 (activated sludge): 190 mg/l Exposure time: 3 h Test Type: Respiration inhibition Method: OECD Test Guideline 209

Persistence and degradability

No data available

Bioaccumulative potential

Components:

N-(3-(trimethoxysilyl)propyl)ethylenediamine:

Partition coefficient: n-octanol/water	:	log Pow: -4 - -0.82 (68 °F / 20 °C)

phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)-:

Partition coefficient: n-octanol/water	:	log Pow: 7.3 (77 °F / 25 °C)

Mobility in soil

No data available

Other adverse effects

Product:

Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	:	Very toxic to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.
Contaminated packaging	:	Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International transport regulations

Land transport
USDOT: Not classified as a dangerous good under transport regulations
TDG: Not classified as a dangerous good under transport regulations

Sea transport
IMDG: Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO: Not classified as a dangerous good under transport regulations

SECTION 15. REGULATORY INFORMATION

TSCA list

TSCA - 5(a) Significant New Use Rule List of Chemicals	:	No substances are subject to a Significant New Use Rule.
U.S. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpart D)	:	No substances are subject to TSCA 12(b) export notification requirements.

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Respiratory or skin sensitisation

Reproductive toxicity
Germ cell mutagenicity
Specific target organ toxicity (single or repeated exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

California Prop. 65

⚠**WARNING:** This product can expose you to chemicals including crystalline silica, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

The components of this product are reported in the following inventories:

TSCA : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

DSL : On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

Further information

Revision Date : 11/20/2023

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
CA AB OEL : Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL : Canada. British Columbia OEL
CA ON OEL : Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.
CA QC OEL : Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
NIOSH REL : USA. NIOSH Recommended Exposure Limits
OSHA : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA : USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts

ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
CA AB OEL / TWA	:	8-hour Occupational exposure limit
CA AB OEL / STEL	:	15-minute occupational exposure limit
CA BC OEL / TWA	:	8-hour time-weighted average
CA BC OEL / STEL	:	short-term exposure limit
CA ON OEL / TWA	:	Time-Weighted Average Limit (TWA)
CA QC OEL / TWAEV	:	Time-weighted average exposure value
CA QC OEL / STEV	:	Short-term exposure value
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
OSHA / TWA	:	8-hour time weighted average
OSHA / TWA	:	8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.