

**Safety Data Sheet**  
**ULTRABOND ECO 980**

Safety Data Sheet dated: 06/15/2023 - version 9

Date of first edition: 11/14/2018



**1. Identification**

**Product identifier**

Mixture identification:

Trade name: ULTRABOND ECO 980

Trade code: 9019427

**Recommended use and restrictions on use**

Recommended use: Adhesive

Restrictions on use: Not available

**Supplier's details**

Company: MAPEI INC. (Canada)

2900 Francis-Hughes Avenue

H7L 3J5 - Laval - QC - CAN

Phone: 1-450-662-1212

Responsible: RDProductSafety@mapei.com

**Emergency phone number**

Emergency Number (USA/Canada) CHEMTREC 1(800) 424-9300 / 1(703) 527-3887

Emergency Transport CANUTEC (Canada) 1-613-996-6666

**2. Hazard identification**



**Classification of the product**

Eye irritation, Category 2A

Causes serious eye irritation.

Respiratory Sensitization, Category 1

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin Sensitization, Category 1

May cause an allergic skin reaction.

**Label elements**

**Pictograms and Signal Words**



Danger

**Hazard statements**

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Precautionary statements**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P261 Avoid breathing vapours.

P264 Wash skin thoroughly after handling.

P272 Contaminated work clothing must not be allowed out of the workplace.

P280 Wear protective gloves/clothing and eye/face protection.

P284 [In case of inadequate ventilation] wear respiratory protection.

P302+P352 IF ON SKIN: Wash with plenty of water.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P321 Specific treatment (see ... On this label).

P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P342+P311	If experiencing respiratory symptoms: Call a doctor
P362+P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.
P501	Dispose of contents/container in accordance with applicable regulations.

**Other hazards**

None

**Ingredient(s) with unknown acute toxicity**

None

This product contains crystalline silica (quartz sand). IARC has classified crystalline silica as a Group 1 carcinogen. Both IARC and NTP consider silica as a known human carcinogen. Evidence is based on the chronic and long-term exposure workers have had to respirable sized crystalline silica dust particles. Because this product is in liquid or paste form, it does not pose a dust hazard; therefore, this classification is not relevant. (Note: sanding of the hardened product may create a silica dust hazard)

**3. Composition/information on ingredients**

**Substances**

Not Relevant

**Mixtures**

Hazardous components within the meaning of WHMIS 2015 and related classification:

**List of components**

Qty	Name	Ident. Numb.	Classification	Registration Number
2.5-5 %	calcium oxide; quicklime	CAS:1305-78-8 EC:215-138-9	Skin Irrit. 2, H315; STOT SE 3, H335; Eye Dam. 1, H318	
0.49-1 %	diphenylmethane-4,4'-diisocyanate	CAS:101-68-8 EC:202-966-0 Index:615-005-00-9	Acute Tox. 4, H332; Eye Irrit. 2A, H319; STOT SE 3, H335; Skin Irrit. 2, H315; Resp. Sens. 1, H334; Skin Sens. 1, H317; STOT RE 2, H373; Carc. 2, H351	01-2119457014-47-XXXX
0.49-1 %	silica sand; quartz	CAS:14808-60-7 EC:238-878-4	STOT RE 1, H372; Carc. 1A, H350	
0.1-0.25 %	4-methylbenzenesulfonyl isocyanate; 4-isocyanatosulphonyltoluene	CAS:4083-64-1 EC:223-810-8 Index:615-012-00-7	Eye Irrit. 2A, H319; STOT SE 3, H335; Skin Irrit. 2, H315; Resp. Sens. 1, H334	

The actual concentration of the components listed above is withheld as a trade secret.

**4. First-aid measures**

**Description of necessary first-aid measures**

In case of skin contact:

- Immediately take off all contaminated clothing.
- Remove contaminated clothing immediately and dispose of safely.
- After contact with skin, wash immediately with soap and plenty of water.
- If skin irritation or rash occurs: Get medical advice/attention.

In case of eyes contact:

- After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.
- Protect uninjured eye.
- Remove contact lenses, if present and easy to do. Continue rinsing.

In case of Ingestion:

- Do not induce vomiting, get medical attention showing the SDS and the hazard label.

In case of Inhalation:

- Remove casualty to fresh air and keep warm and at rest.
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

Eye irritation

Eye damages

**Indication of immediate medical attention and special treatment needed, if necessary**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

(see paragraph 4.1)

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## 5. Fire-fighting measures

### Suitable and unsuitable extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO<sub>2</sub>).

Unsuitable extinguishing media:

None in particular.

### Specific hazards arising from the hazardous product

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

Hazardous combustion products: Not available

Explosive properties: Not Relevant

Oxidizing properties: Not Relevant

### Special protective equipment and precautions for fire-fighters

Use suitable breathing apparatus.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

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

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## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Limit leakages with earth or sand.

### Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Retain contaminated washing water and dispose it.

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## 7. Handling and storage

### Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Exercise the greatest care when handling or opening the container.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

Wash skin thoroughly after handling.

See also section 8 for recommended protective equipment.

### Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

Storage temperature: Not available

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## 8. Exposure controls/personal protection

### Control parameters

#### Community Occupational Exposure Limits (OEL)

	OEL Type	Country	Occupational Exposure Limit
calcium oxide; quicklime CAS: 1305-78-8	OSHA		Long Term: 5 mg/m <sup>3</sup>
	ACGIH		Long Term: 2 mg/m <sup>3</sup> upper respiratory tract irritation;

	MAK	GERMANY	Long Term: 1 mg/m3
	ACGIH		Long Term: 2 mg/m3 upper respiratory tract irritation
	MAK	AUSTRIA	Long Term: 1 mg/m3; Short Term: 4 mg/m3
	MAK	SWITZERLAND	Long Term: 2 mg/m3
		D	
	MAK	SWITZERLAND	Long Term: 1 mg/m3
		D	
diphenylmethane-4,4'-diisocyanate CAS: 101-68-8	ACGIH		Long Term: 0.005 ppm Resp sens
	MAK	GERMANY	Long Term: 0.05 mg/m3
	ACGIH		Long Term: 0.005 ppm respiratory sensitization (listed under Methylene bisphenyl isocyanate (MDI))
	OSHA		Ceiling - Short Term: 0.2 mg/m3 - 0.02 ppm
	MAK	AUSTRIA	Long Term: 0.05 mg/m3 - 0.005 ppm; Short Term: 0.1 mg/m3 - 0.01 ppm
	ACGIH		Long Term: 0.005 ppm respiratory sensitization (listed under Methylene bisphenyl isocyanate (MDI))
	OSHA		Ceiling - Short Term: 0.2 mg/m3 - 0.02 ppm
silica sand; quartz CAS: 14808-60-7	ACGIH		Long Term: 0.025 mg/m3 A2 - Suspected Human Carcinogen;lung cancer;pulmonary fibrosis;
	ACGIH		Long Term: 0.025 mg/m3 A2 - Suspected Human Carcinogen;lung cancer;pulmonary fibrosis
	MAK	AUSTRIA	Long Term: 0.15 mg/m3
	MAK	SWITZERLAND	Long Term: 0.15 mg/m3
		D	

**Predicted No Effect Concentration (PNEC) values**

diphenylmethane-4,4'-diisocyanate  
CAS: 101-68-8

Exposure Route: Fresh Water; PNEC Limit: 1 mg/l

Exposure Route: Marine water; PNEC Limit: 0.1 mg/l

Exposure Route: Soil; PNEC Limit: 1 mg/kg

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 1 mg/l

Exposure Route: Intermittent release; PNEC Limit: 10 mg/l

**Derived No Effect Level (DNEL) values**

diphenylmethane-4,4'-diisocyanate  
CAS: 101-68-8

Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects  
Worker Industry: 50 mg/kg

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects  
Worker Industry: 0.1 mg/m3

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects  
Worker Industry: 0.1 mg/m3

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects  
Worker Industry: 0.05 mg/m3

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects  
Worker Industry: 0.05 mg/m3

Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects  
Consumer: 25 mg/kg

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects  
Consumer: 0.05 mg/m3

Exposure Route: Human Oral; Exposure Frequency: Short Term, systemic effects  
Consumer: 20 mg/kg

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects  
Consumer: 0.05 mg/m3

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects  
Consumer: 0.025 mg/m<sup>3</sup>

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects  
Consumer: 0.025 mg/m<sup>3</sup>

Exposure Route: Human Dermal; Exposure Frequency: Short Term, local effects  
Worker Industry: 28.7 mg/cm<sup>2</sup>; Consumer: 17.2 mg/cm<sup>2</sup>

### Appropriate engineering controls

Not available

### Individual protection measures, such as personal protective equipment (PPE)

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Suitable materials for safety gloves; 29 CFR 1910.138 - ANSI/ISEA 105:

Polychloroprene - CR: thickness  $\geq 0,5$ mm; breakthrough time  $\geq 480$ min.

Nitrile rubber - NBR: thickness  $\geq 0,35$ mm; breakthrough time  $\geq 480$ min.

Butyl rubber - IIR: thickness  $\geq 0,5$ mm; breakthrough time  $\geq 480$ min.

Fluorinated rubber - FKM: thickness  $\geq 0,4$ mm; breakthrough time  $\geq 480$ min.

Use impervious gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Respiratory protection must be used where exposure levels exceed workplace exposure limits. Refer to 29 CFR 1910.134 - CSA Z94.4 for information on selection and use of appropriate respiratory protection equipment.

Use adequate protective respiratory equipment.

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## 9. Physical and chemical properties

### Information on basic physical and chemical properties

Physical state: Liquid

Appearance and colour: paste Beige

Odour: Characteristic

Odour threshold: Not Relevant

pH: Not Relevant

Melting point / freezing point: Not Relevant

Initial boiling point and boiling range: Not Relevant

Flash point: Not Relevant

Evaporation rate: Not Relevant

Upper/lower flammability or explosive limits: Not Relevant

Vapour density: Not Relevant

Vapour pressure: Not Relevant

Relative density: 1.45 g/cm<sup>3</sup>

Solubility in water: dispersible

Solubility in oil: Not Relevant

Partition coefficient (n-octanol/water): Not Relevant

Auto-ignition temperature: Not Relevant

Decomposition temperature: Not Relevant

Viscosity: Not Relevant

Explosive properties: Not Relevant

Oxidizing properties: Not Relevant

Solid/gas flammability: Not Relevant

### Other information

Substance Groups relevant properties Not Relevant

Miscibility: Not Relevant

Fat Solubility: Not Relevant

Conductivity: Not Relevant

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## 10. Stability and reactivity

### Reactivity

Stable under normal conditions

### Chemical stability

Data not available.

**Possibility of hazardous reactions**

None.

**Conditions to avoid**

Stable under normal conditions.

**Incompatible materials**

None in particular.

**Hazardous decomposition products**

None.

**11. Toxicological information****Information on toxicological effects**

Likely routes of exposure:

Skin contact, skin absorption, eye contact, inhalation and ingestion.

**Toxicological Information of the Preparation**

a) acute toxicity	Not classified
	Based on available data, the classification criteria are not met
b) skin corrosion/irritation	Not classified
	Based on available data, the classification criteria are not met
c) serious eye damage/irritation	The product is classified: Eye irritation, Category 2A(H319)
d) respiratory or skin sensitisation	The product is classified: Respiratory Sensitization, Category 1(H334), Skin Sensitization, Category 1(H317)
e) germ cell mutagenicity	Not classified
	Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified
	Based on available data, the classification criteria are not met
g) reproductive toxicity	Not classified
	Based on available data, the classification criteria are not met
h) STOT-single exposure	Not classified
	Based on available data, the classification criteria are not met
i) STOT-repeated exposure	Not classified
	Based on available data, the classification criteria are not met
j) aspiration hazard	Not classified
	Based on available data, the classification criteria are not met

**Toxicological information on main components of the mixture:**

calcium oxide; quicklime	a) acute toxicity	LD50 Oral Rat = 500 mg/kg	
		LC50 Inhalation Rat > 6.04 mg/l 4h	
diphenylmethane-4,4'-diisocyanate	a) acute toxicity	LD50 Oral Rat > 2000 mg/kg	
		LD50 Skin Rabbit > 9400 mg/kg	
	b) skin corrosion/irritation	Skin Irritant Skin Rabbit Positive	
	d) respiratory or skin sensitisation	Skin Sensitization Skin Mouse Positive	
		Respiratory Sensitization Inhalation Positive	
	f) carcinogenicity	Carcinogenicity Inhalation Rat = 6 mg/m3	2 y
g) reproductive toxicity	NOAEL Inhalation Rat = 12 mg/m3	20 d	
silica sand; quartz	a) acute toxicity	LD50 Oral Rat = 500 mg/kg	
4-methylbenzenesulfonyl isocyanate; 4-isocyanatosulphonyltoluene	a) acute toxicity	LC50 Inhalation Rat > 640 ppm 1h	
		LD50 Oral Rat = 2234 mg/kg	

**Substance(s) listed on the IARC Monographs:**

diphenylmethane-4,4'-diisocyanate Group 3  
silica sand; quartz Group 1

**Substance(s) listed as OSHA Carcinogen(s):**

silica sand; quartz

**Substance(s) listed as NIOSH Carcinogen(s):**

silica sand; quartz

**Substance(s) listed on the NTP report on Carcinogens:**

silica sand; quartz

**12. Ecological information****Ecotoxicity**

Adopt good working practices, so that the product is not released into the environment.

**List of Eco-Toxicological properties of the product**

Not classified for environmental hazards.

Based on available data, the classification criteria are not met

**List of Eco-Toxicological properties of the components**

Component	Ident. Numb.	Ecotox Data
calcium oxide; quicklime	CAS: 1305-78-8 - EINECS: 215-138-9	a) Aquatic acute toxicity : LC50 Fish Cyprinus carpio = 1070 mg/L 96h IUCLID
diphenylmethane-4,4'-diisocyanate	CAS: 101-68-8 EINECS: 202-966-0 - INDEX: 615-005-00-9	a) Aquatic acute toxicity : LC50 Fish > 1000 mg/L 96  a) Aquatic acute toxicity : EC50 Daphnia > 1000 mg/L 24 b) Aquatic chronic toxicity : NOEC Daphnia > 10 mg/L - 21 d a) Aquatic acute toxicity : EC50 Algae > 1640 mg/L 72 c) Bacteria toxicity : EC50 > 100 mg/L 3 d) Terrestrial toxicity : NOEC > 1000 mg/kg - 14 d e) Plant toxicity : NOEC > 1000 mg/kg - 14 d
silica sand; quartz	CAS: 14808-60-7 - EINECS: 238-878-4	a) Aquatic acute toxicity : LC50 carp > 10000 mg/L 72h

**Persistence and degradability**

N.A.

**Bioaccumulative potential**

N.A.

**Mobility in soil**

N.A.

**Other adverse effects**

N.A.

**13. Disposal considerations****Safe handling and methods for disposal**

The generation of waste should be avoided or minimized wherever possible. Recover if possible.

**Methods of disposal:**

Disposal of this product, solutions, packaging and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor.

Do not dispose of waste into sewers.

**Disposal considerations:**

Do not allow to enter drains or watercourses.

Dispose of product according to all federal, state and local applicable regulations.

If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be

assigned.

Dispose of containers contaminated by the product in accordance with local or national legal provisions. For further information, contact your local waste authority.

**Special precautions:**

This material and its container must be disposed of in a safe way. Care should be taken when handling untreated empty containers.

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Empty containers or liners may retain some product residues. Do not re-use empty containers.

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**14. Transport information**

Not classified as dangerous in the meaning of transport regulations.

**UN number**

TDG-UN number: NA3082

ADR-UN number: Not Applicable

DOT-UN Number: NA3082

IATA-Un number: -

IMDG-Un number: -

**UN proper shipping name**

TDG-Shipping Name: Not Applicable

ADR-Shipping Name: Not Applicable

DOT-Proper Shipping Name: Other regulated substances, liquid, n.o.s (methylene diphenyl diisocyanate)

IATA-Technical name: - (methylene diphenyl diisocyanate)

IMDG-Technical name: - (methylene diphenyl diisocyanate)

**Transport hazard class(es)**

TDG-Class: 9 Not Applicable

ADR-Class: Not Applicable

DOT-Hazard Class: 9

IATA-Class: -

IMDG-Class: -

**Packing group**

TDG-Packing Group: Not Applicable

ADR-Packing Group: Not Applicable

DOT Packing Group: III

IATA-Packing group: -

IMDG-Packing group: -

**Environmental hazards**

Marine pollutant: No

Environmental Pollutant: Not Applicable

DOT-RQ: Yes                      DOT-RQ - Quantity: 5000 lbs.

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

Not Applicable

**Special precautions in connection with transport or conveyance**

TDG:

Not Applicable

Department of Transportation (DOT):

Not Applicable

DOT-Special Provision(s): A189, IB3, T2, TP1

DOT-Label(s): 9

DOT-Symbol: N/A

DOT-Cargo Aircraft: N/A

DOT-Passenger Aircraft: N/A

DOT-Bulk: N/A

DOT-Non-Bulk: N/A

Road and Rail (ADR-RID):

Not Applicable

ADR-Label: -

ADR-Hazard identification number: -

ADR-Transport category (Tunnel restriction code): -



**Air (IATA):**

- Not Applicable
- IATA-Passenger Aircraft: -
- IATA-Cargo Aircraft: -
- IATA-Label: -
- IATA-Subsidiary hazards: -
- IATA-Erg: -
- IATA-Special Provisions: -

**Sea (IMDG):**

- Not Applicable
- IMDG-Stowage Code: -
- IMDG-Stowage Note: -
- IMDG-Subsidiary hazards: -
- IMDG-Special Provisions: -
- IMDG-Page: N/A
- IMDG-Label: N/A
- IMDG-EMS: -
- IMDG-MFAG: N/A

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**15. Regulatory information**

**Canada - Federal regulations**

**DSL - Domestic Substances List**

**DSL (Domestic Substances List)**

All the substances are listed in the DSL.

**NDSL - Non Domestic Substances List**

**NDSL (Non Domestic Substances List)**

No substances listed

**NPRI - National Pollutant Release Inventory**

**NPRI (National Pollutant Release Inventory) - List of substances listed.**

No substances listed

**USA - Federal regulations**

**TSCA - Toxic Substances Control Act**

**TSCA inventory:**

All the components are listed on the TSCA inventory

**TSCA listed substances:**

- calcium oxide; quicklime is listed in TSCA Section 8b
- diphenylmethane-4,4'-diisocyanate is listed in TSCA Section 8b Section 8a - PAIR Section 5
- silica sand; quartz is listed in TSCA Section 8b
- 4-methylbenzenesulfonyl isocyanate; 4-isocyanatosulphonyltoluene is listed in TSCA Section 8b

**SARA - Superfund Amendments and Reauthorization Act**

**Section 302 - Extremely Hazardous Substances:**

No substances listed

**Section 304 - Hazardous substances:**

diphenylmethane-4,4'-diisocyanate

**Section 313 - Toxic chemical list:**

diphenylmethane-4,4'-diisocyanate

**CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act**

**Substance(s) listed under CERCLA:**

diphenylmethane-4,4'-diisocyanate Reportable quantity: 5000 pounds

**CAA - Clean Air Act**

**CAA listed substances:**

diphenylmethane-4,4'-diisocyanate is listed in CAA Section 112(b) - HAP Section 112(b) - HON

**CWA - Clean Water Act****CWA listed substances:**

No substances listed

**USA - State specific regulations****California Proposition 65****Substance(s) listed under California Proposition 65:**

silica sand; quartz Listed as carcinogen

**Massachusetts Right to know****Substance(s) listed under Massachusetts Right to know:**

calcium oxide; quicklime  
diphenylmethane-4,4'-diisocyanate  
silica sand; quartz

**Pennsylvania Right to know****Substance(s) listed under Pennsylvania Right to know:**

calcium oxide; quicklime  
diphenylmethane-4,4'-diisocyanate  
silica sand; quartz

**New Jersey Right to know****Substance(s) listed under New Jersey Right to know:**

calcium oxide; quicklime  
diphenylmethane-4,4'-diisocyanate  
silica sand; quartz

**16. Other information**

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Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. The information herein is presented in good faith and believed to be accurate as of the effective date given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

This document was prepared by a competent person who has received appropriate training.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This SDS cancels and replaces any preceding release.

Code	Description
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H350	May cause cancer.
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure if inhaled.

  

Code	Hazard class and hazard category	Description
A.1/4/Inhal	Acute Tox. 4	Acute toxicity (inhalation), Category 4
A.2/2	Skin Irrit. 2	Skin irritation, Category 2
A.3/1	Eye Dam. 1	Serious eye damage, Category 1
A.3/2A	Eye Irrit. 2A	Eye irritation, Category 2A
A.4.1/1	Resp. Sens. 1	Respiratory Sensitization, Category 1
A.4.2/1	Skin Sens. 1	Skin Sensitization, Category 1
A.6/1A	Carc. 1A	Carcinogenicity, Category 1A

A.6/2	Carc. 2	Carcinogenicity, Category 2
A.8/3	STOT SE 3	Specific target organ toxicity following single exposure, Category 3
A.9/1	STOT RE 1	Specific target organ toxicity following repeated exposure, Category 1
A.9/2	STOT RE 2	Specific target organ toxicity following repeated exposure, Category 2

**Legend to abbreviations and acronyms used in the safety data sheet:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.  
 RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.  
 IMDG: International Maritime Code for Dangerous Goods.  
 IATA: International Air Transport Association.  
 IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).  
 ICAO: International Civil Aviation Organization.  
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).  
 GHS: Globally Harmonized System of Classification and Labeling of Chemicals.  
 CLP: Classification, Labeling, Packaging.  
 EINECS: European Inventory of Existing Commercial Chemical Substances.  
 INCI: International Nomenclature of Cosmetic Ingredients.  
 CAS: Chemical Abstracts Service (division of the American Chemical Society).  
 GefStoffVO: Ordinance on Hazardous Substances, Germany.  
 LC50: Lethal concentration, for 50 percent of test population.  
 LD50: Lethal dose, for 50 percent of test population.  
 DNEL: Derived No Effect Level.  
 PNEC: Predicted No Effect Concentration.  
 TLV: Threshold Limiting Value.  
 TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).  
 STEL: Short Term Exposure limit.  
 STOT: Specific Target Organ Toxicity.  
 WGK: German Water Hazard Class.  
 KSt: Explosion coefficient.

**Paragraphs modified from the previous revision:**

- Safety Data Sheet
- 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING
- 2. HAZARDS IDENTIFICATION
- 3. COMPOSITION/INFORMATION ON INGREDIENTS
- 4. FIRST AID MEASURES
- 5. FIRE-FIGHTING MEASURES
- 6. ACCIDENTAL RELEASE MEASURES
- 7. HANDLING AND STORAGE
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 9. PHYSICAL AND CHEMICAL PROPERTIES
- 10. STABILITY AND REACTIVITY
- 11. TOXICOLOGICAL INFORMATION
- 12. ECOLOGICAL INFORMATION
- 13. DISPOSAL CONSIDERATIONS
- 14. TRANSPORT INFORMATION
- 15. REGULATORY INFORMATION
- 16. OTHER INFORMATION