

## Safety Data Sheet

### ULTRABOND ECO 975

Safety Data Sheet dated: 09/24/2024 - version 11

Date of first edition: 05/28/2015



## 1. IDENTIFICATION

### Product identifier

Mixture identification:

Trade name: ULTRABOND ECO 975

Trade code: 9019456

### Recommended use of the chemical and restrictions on use

Recommended use: Polyurethane-based adhesive

Restrictions on use: Not available

### Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Company: MAPEI CORP. (USA and Puerto Rico)

1144 East Newport Center Drive - 33442 - Deerfield Beach - FL - USA

Phone: 954-246-8888

Responsible: RDProductSafety@mapei.com

### Emergency 24 hour numbers:

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

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

## 2. HAZARD(S) IDENTIFICATION



### Classification of the chemical

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.

Carcinogenicity, Category 2

Suspected of causing cancer if inhaled, in contact with skin and if swallowed.

### Label elements

#### Hazard pictograms and Signal Word



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.

H351 Suspected of causing cancer if inhaled, in contact with skin and if swallowed.

### Precautionary statements

P201 Obtain special instructions before use.

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

P261 Avoid breathing mist/vapours/spray.

P264 Wash skin thoroughly after handling.

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

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

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

P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position 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.
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.
P363	Wash contaminated clothing before reuse.
P501	Dispose of contents/container in accordance with applicable regulations.

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

None

**Hazards not otherwise classified identified during the classification process:**

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 29 CFR 1910.1200 and related classification:

**List of components**

Qty	Name	Ident. Numb.	Classification
2.5-5 %	calcium oxide	CAS:1305-78-8 EC:215-138-9	STOT SE 3, H335; Skin Irrit. 2, H315; Eye Dam. 1, H318
0.49-1 %	free crystalline silica ( $\varnothing > 10 \mu$ )	CAS:14808-60-7 EC:238-878-4	STOT RE 1, H372; Carc. 1A, H350
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
0.25-0.49 %	4-isocyanatesulphonyltoluene; tosyl isocyanate	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

### 4. FIRST AID MEASURES

**Description of first aid measures**

In case of skin contact:

- Immediately take off all contaminated clothing.
- OBTAIN IMMEDIATE MEDICAL ATTENTION.
- Obtain medical attention if skin related symptoms persist.
- Remove contaminated clothing immediately and dispose of safely.
- After contact with skin, wash immediately with soap and plenty of water.

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.

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.

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

Eye irritation

Eye damages

**Indication of any immediate medical attention and special treatment needed**

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)

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media:

- Water.
- Carbon dioxide (CO2).

Unsuitable extinguishing media:

None in particular.

Specific hazards arising from the chemical

- 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.

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.

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.
- 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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Community Occupational Exposure Limits (OEL)

	OEL Type	Country	Occupational Exposure Limit
calcium oxide CAS: 1305-78-8	ACGIH		Long Term: 2 mg/m3 URT irr
	MAK	GERMANY	Long Term: 1 mg/m3
	OSHA		Long Term: 5 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	SWITZERLAN	Long Term: 2 mg/m3

free crystalline silica (Ø >10 µ)  
CAS: 14808-60-7

Long Term: 0.025 mg/m3  
A2 - Suspected Human Carcinogen;lung cancer;pulmonary fibrosis

MAK AUSTRIA Long Term: 0.15 mg/m3  
ACGIH Long Term: 0.025 mg/m3  
(R), A2 - Pulm fibrosis, lung cancer

MAK SWITZERLAND Long Term: 0.15 mg/m3

EU Long Term: 0.1 mg/m3  
Behaviour Binding

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 Short Term: Ceiling - 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 Short Term: Ceiling - 0.2 mg/m3 - 0.02 ppm

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

calcium oxide Exposure Route: Fresh Water; PNEC Limit: 0.49 mg/l  
CAS: 1305-78-8

Exposure Route: Marine water; PNEC Limit: 0.32 mg/l

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 3 mg/l

Exposure Route: Soil; PNEC Limit: 1080 mg/kg

Exposure Route: Soil; PNEC Limit: 816 mg/l

diphenylmethane-4,4'-diisocyanate Exposure Route: Fresh Water; PNEC Limit: 1 mg/l  
CAS: 101-68-8

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

calcium oxide Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects  
CAS: 1305-78-8 Worker Industry: 4 mg/m3; Consumer: 4 mg/m3

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects  
Worker Industry: 1 mg/m3; Consumer: 1 mg/m3

diphenylmethane-4,4'-diisocyanate Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects  
CAS: 101-68-8 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/m<sup>3</sup>

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/m<sup>3</sup>

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**

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  $\geq 0,5\text{mm}$ ; breakthrough time  $\geq 480\text{min}$ .

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

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

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

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: 94 °C (201 °F)

Evaporation rate: Not Relevant

Upper/lower flammability or explosive limits: Not Relevant

Vapour density: Not Relevant

Vapour pressure: Not Relevant

Relative density: 1.10 g/cm<sup>3</sup>

Solubility in water: Insoluble

Solubility in oil: partly soluble

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

Auto-ignition temperature: Not Relevant

Decomposition temperature: Not Relevant

Viscosity: 110,000.00 mPA-s

Kinematic viscosity:  $> 20,5 \text{ mm}^2/\text{sec}$  (40 °C)  $\text{mm}^2/\text{s}$

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

**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****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	The product is classified: Carcinogenicity, Category 2(H351)
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	a) acute toxicity	LD50 Oral Rat > 2000 mg/kg	
		LD50 Skin Rat > 2500 mg/kg	
free crystalline silica (Ø >10 µ)	a) acute toxicity	LD50 Oral > 2000 mg/kg	
		LD50 Skin > 2000 mg/kg	
diphenylmethane-4,4'-diisocyanate	a) acute toxicity	LD50 Oral Rat > 2000 mg/kg	
	f) carcinogenicity	Carcinogenicity Inhalation Rat = 6 mg/m3	2 y
	g) reproductive toxicity	NOAEL Inhalation Rat = 12 mg/m3	20 d
4-isocyanatesulphonyltoluene; tosyl isocyanate	a) acute toxicity	LC50 Inhalation Rat > 640 ppm 1h	
		LD50 Oral Rat = 2234 mg/kg	

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

free crystalline silica ( $\emptyset > 10 \mu$ )      Group 1  
diphenylmethane-4,4'-diisocyanate Group 3

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

free crystalline silica ( $\emptyset > 10 \mu$ )

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

free crystalline silica ( $\emptyset > 10 \mu$ )

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

free crystalline silica ( $\emptyset > 10 \mu$ )

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**12. ECOLOGICAL INFORMATION****Toxicity**

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

Eco-Toxicological Information:

**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	CAS: 1305-78-8 - EINECS: 215-138-9	a) Aquatic acute toxicity : LC50 Fish = 457 mg/L 96
		a) Aquatic acute toxicity : EC50 Daphnia = 49.1 mg/L 48
		b) Aquatic chronic toxicity : NOEC Daphnia = 32 mg/L - 14 d
		a) Aquatic acute toxicity : LC50 Fish = 50.6 mg/L 96
		a) Aquatic acute toxicity : LC50 Daphnia = 158 mg/L 96
		a) Aquatic acute toxicity : EC50 Algae = 184.57 mg/L 72
		b) Aquatic chronic toxicity : NOEC Algae = 48 mg/L 72
diphenylmethane-4,4'-diisocyanate	CAS: 101-68-8 - EINECS: 202-966-0 - INDEX: 615-005-00-9	a) Aquatic acute toxicity : LC50 Fish Cyprinus carpio = 1070 mg/L 96h IUCLID
		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

**Persistence and degradability**

N.A.

**Bioaccumulative potential**

N.A.

**Mobility in soil**

N.A.

**Other adverse effects**

N.A.

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**13. DISPOSAL CONSIDERATIONS****Waste treatment methods**

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**

DOT-UN Number: Not Applicable

ADR-UN number: Not Applicable

IATA-Un number: Not Applicable

IMDG-Un number: Not Applicable

**UN proper shipping name**

DOT-Proper Shipping Name: Not Applicable

ADR-Shipping Name: Not Applicable

IATA-Technical name: Not Applicable

IMDG-Technical name: Not Applicable

**Transport hazard class(es)**

DOT-Hazard Class: Not Applicable

ADR-Class: Not Applicable

IATA-Class: Not Applicable

IMDG-Class: Not Applicable

**Packing group**

DOT Packing Group: Not Applicable

ADR-Packing Group: Not Applicable

IATA-Packing group: Not Applicable

IMDG-Packing group: Not Applicable

**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 MARPOL73/78 and the IBC Code**

Not Applicable

**Special precautions**

Department of Transportation (DOT):

Not Applicable

Road and Rail (ADR-RID):

Not Applicable

Air (IATA):

Not Applicable

Sea (IMDG):

Not Applicable

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## 15. REGULATORY INFORMATION

### USA - Federal regulations

#### TSCA - Toxic Substances Control Act

All the components are listed on the TSCA inventory

**TSCA listed substances:**

calcium oxide                      is listed in TSCA    Section 8b

free crystalline silica ( $\varnothing > 10 \mu$ )    is listed in TSCA    Section 8b



diphenylmethane-4,4'-diisocyanate is listed in TSCA Section 8b Section 8a - PAIR Section 5  
4-isocyanatesulphonyltoluene; is listed in TSCA Section 8b  
tosyl isocyanate

#### **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:**

free crystalline silica ( $\emptyset > 10 \mu$ ) Listed as carcinogen

##### **Massachusetts Right to know**

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

calcium oxide

free crystalline silica ( $\emptyset > 10 \mu$ )

diphenylmethane-4,4'-diisocyanate

##### **Pennsylvania Right to know**

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

calcium oxide

free crystalline silica ( $\emptyset > 10 \mu$ )

diphenylmethane-4,4'-diisocyanate

##### **New Jersey Right to know**

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

calcium oxide

free crystalline silica ( $\emptyset > 10 \mu$ )

diphenylmethane-4,4'-diisocyanate

#### **Canada - Federal regulations**

##### **DSL - Domestic Substances List**

All the substances are listed in the DSL.

##### **NDSL - Non Domestic Substances List**

This product complies with NDSL inventory

##### **NPRI - National Pollutant Release Inventory**

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

No substances listed

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## **16. OTHER INFORMATION**

Safety Data Sheet dated: 9/24/2024 - version 11

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:**

- 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING
- 2. HAZARDS IDENTIFICATION
- 3. COMPOSITION/INFORMATION ON INGREDIENTS
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 9. PHYSICAL AND CHEMICAL PROPERTIES
- 11. TOXICOLOGICAL INFORMATION
- 12. ECOLOGICAL INFORMATION

