

## Safety Data Sheet

### ULTRABOND G-21 / A

Safety Data Sheet dated: 09/24/2025 - version 12

Date of first edition: 05/12/2015



## 1. IDENTIFICATION

### Product identifier used on the label

Mixture identification:

Trade name: ULTRABOND G-21 / A

Trade code: 9024847

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

Recommended use: Epoxy resins

Restrictions on use: Not available

### Name, U.S. address, and U.S. 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

Skin irritation, Category 2

Causes skin irritation.

Skin Sensitization, Category 1B

May cause an allergic skin reaction.

Reproductive toxicity, Category 1B

May damage fertility. May damage the unborn child.

Acute aquatic hazard, category 3

Harmful to aquatic life

Chronic (long term) aquatic hazard, category 3

Harmful to aquatic life with long lasting effects.

### Label elements

#### Hazard pictograms and Signal Word



Danger

### Hazard statements

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H360FD May damage fertility. May damage the unborn child.

H402 Harmful to aquatic life

H412 Harmful to aquatic life with long lasting effects.

### Precautionary statements

P201 Obtain special instructions before use.

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

P260 Do not breathe mist/vapours/spray.

P264 Wash skin thoroughly after handling.

P273 Avoid release to the environment.

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

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

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

P314 Get medical advice/attention if you feel unwell.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.  
P501 Dispose of contents/container in accordance with applicable regulations.

#### Hazards associated with foreseeable chemical reactions

None

#### 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                                                                                               |
|-------------|-----------------------------------------------------------------------|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| ≥5 - <10 %  | bis-[4-(2,3-epoxipropoxy)phenyl]propane                               | CAS:1675-54-3, 25085-99-8<br>EC:216-823-5<br>EU CLP Index:603-073-00-2 | Skin Irrit. 2, H315; Skin Sens. 1, H317; Eye Irrit. 2A, H319; Aquatic Chronic 2, H411; Aquatic Acute 2, H401 |
| ≥3 - <5 %   | alkyl epoxy resin; Oxirane, mono((C12-14-alkyloxy)methyl) derivatives | CAS:68609-97-2<br>EC:271-846-8<br>EU CLP Index:603-103-00-4            | Skin Irrit. 2, H315; Skin Sens. 1B, H317; Repr. 1B, H360F                                                    |
| ≥1 - <2.5 % | silica sand; quartz                                                   | CAS:14808-60-7<br>EC:238-878-4                                         | STOT RE 1, H372; Carc. 1A, H350                                                                              |
| ≥0.6 - <1 % | 4-nonylphenol, branched; Isononylphenol                               | CAS:84852-15-3<br>EC:284-325-5<br>EU CLP Index:601-053-00-8            | Repr. 2, H361fd; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302     |

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

### 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  
Skin Irritation  
Erythema

#### 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

Data not available.  
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

Occupational Exposure Limits (OEL)

|                                        | OEL<br>Type | Country | Occupational Exposure Limit                                                              |
|----------------------------------------|-------------|---------|------------------------------------------------------------------------------------------|
| silica sand; quartz<br>CAS: 14808-60-7 | ACGIH       |         | Long Term: 0,025 mg/m3<br>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/m<sup>3</sup>  
D

EU Long Term: 0,1 mg/m<sup>3</sup>  
Behaviour Binding

### Predicted No Effect Concentration (PNEC) values

alkyl epoxy resin;  
Oxirane, mono((C12-14-  
alkyloxy)methyl)  
derivatives  
CAS: 68609-97-2

Exposure Route: Marine water; PNEC Limit: 0,00072 mg/l

Exposure Route: Fresh Water; PNEC Limit: 0,0072 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 66,77 mg/kg

Exposure Route: Marine water sediments; PNEC Limit: 6,677 mg/kg

Exposure Route: Soil; PNEC Limit: 80,12 mg/kg

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 10 mg/l

4-nonylphenol, branched;  
Isononylphenol  
CAS: 84852-15-3

Exposure Route: Fresh Water; PNEC Limit: 0,000614 mg/l

Exposure Route: Marine water; PNEC Limit: 0,000527 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 4,62 mg/kg

Exposure Route: Marine water sediments; PNEC Limit: 1,23 mg/kg

### Derived No Effect Level (DNEL) values

4-nonylphenol, branched;  
Isononylphenol  
CAS: 84852-15-3

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects  
Worker Industry: 0,5 mg/m<sup>3</sup>; Consumer: 0,4 mg/m<sup>3</sup>

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects  
Worker Industry: 1 mg/m<sup>3</sup>; Consumer: 0,8 mg/m<sup>3</sup>

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects  
Worker Industry: 7,5 mg/kg; Consumer: 3,8 mg/kg

Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects  
Worker Industry: 15 mg/kg; Consumer: 7,6 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects  
Consumer: 0,08 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Short Term, systemic effects  
Consumer: 0,4 mg/kg

Appropriate engineering controls: Not available

### Individual protection measures

Eye protection:

Use close fitting safety goggles, don't use contact lenses.

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.

## 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                 |
| Melting point / freezing point:               | Not Relevant                 |
| Initial boiling point and boiling range:      | Not Relevant                 |
| Flammability:                                 | Not Relevant                 |
| Upper/lower flammability or explosive limits: | Not Relevant                 |
| Flash point:                                  | 94 °C (201 °F)<br>Closed Cup |
| Auto-ignition temperature:                    | Not Relevant                 |
| Decomposition temperature:                    | Not Relevant                 |
| pH:                                           | Not Relevant                 |
| Viscosity:                                    | Not Relevant                 |
| Kinematic viscosity:                          | No data available            |
| Solubility in water:                          | insoluble                    |
| Solubility in oil:                            | Not Relevant                 |
| Partition coefficient (n-octanol/water):      | Not Relevant                 |
| Vapour pressure:                              | Not Relevant                 |
| Evaporation rate:                             | Not Relevant                 |
| Relative density:                             | 1.43 g/cm <sup>3</sup>       |
| Vapour density:                               | >1.0                         |

#### **Particle characteristics:**

|                |                   |
|----------------|-------------------|
| Particle size: | No data available |
|----------------|-------------------|

#### **Other information**

|                                       |              |
|---------------------------------------|--------------|
| Explosive properties:                 | Not Relevant |
| Oxidizing properties:                 | Not Relevant |
| Solid/gas flammability:               | Not Relevant |
| 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**

No data available

### **Chemical stability**

Data not available.

### **Possibility of hazardous reactions**

None.

### **Conditions to avoid**

No data available

### **Incompatible materials**

Data not available.

## Hazardous decomposition products

Data not available.

## 11. TOXICOLOGICAL INFORMATION

### Information on toxicological effects

#### Toxicological Information of the Preparation

|                                      |                                                                                    |
|--------------------------------------|------------------------------------------------------------------------------------|
| a) acute toxicity                    | Not classified<br>Based on available data, the classification criteria are not met |
| b) skin corrosion/irritation         | The product is classified: Skin irritation, Category 2(H315)                       |
| c) serious eye damage/irritation     | Not classified<br>Based on available data, the classification criteria are not met |
| d) respiratory or skin sensitisation | The product is classified: Skin Sensitization, Category 1B(H317)                   |
| e) germ cell mutagenicity            | Not classified<br>Based on available data, the classification criteria are not met |
| f) carcinogenicity                   | Not classified<br>Based on available data, the classification criteria are not met |
| g) reproductive toxicity             | The product is classified: Reproductive toxicity, Category 1B(H360)                |
| h) STOT-single exposure              | Not classified<br>Based on available data, the classification criteria are not met |
| i) STOT-repeated exposure            | Not classified<br>Based on available data, the classification criteria are not met |
| j) aspiration hazard                 | Not classified<br>Based on available data, the classification criteria are not met |

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

|                                                                       |                   |                                                                   |
|-----------------------------------------------------------------------|-------------------|-------------------------------------------------------------------|
| bis-[4-(2,3-epoxipropoxy)phenyl]propane                               | a) acute toxicity | LD50 Skin Rabbit = 20 mg/kg<br><br>LD50 Oral Rat = 11300 µL/kg    |
| alkyl epoxy resin; Oxirane, mono((C12-14-alkyloxy)methyl) derivatives | a) acute toxicity | LD50 Oral Rat = 19200 mg/kg<br><br>LD50 Skin Rabbit = 4000, mg/kg |
| silica sand; quartz                                                   | a) acute toxicity | LD50 Oral > 2000 mg/kg<br>LD50 Skin > 2000 mg/kg                  |
| 4-nonylphenol, branched; Isononylphenol                               | a) acute toxicity | LD50 Oral Rat = 1246, mg/kg                                       |

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

|                                         |         |
|-----------------------------------------|---------|
| bis-[4-(2,3-epoxipropoxy)phenyl]propane | 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

## 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

The product is classified: Acute aquatic hazard, category 3(H402), Chronic (long term) aquatic hazard, category 3(H412)

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

| Component                                                             | Ident. Numb.                                                                     | Ecotox Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| bis-[4-(2,3-epoxipropoxy)phenyl]propane                               | CAS: 1675-54-3, a)<br>25085-99-8 -<br>EINECS: 216-823-5 - INDEX:<br>603-073-00-2 | a) Aquatic acute toxicity : LC50 Fish = 2 mg/L 96h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| alkyl epoxy resin; Oxirane, mono((C12-14-alkyloxy)methyl) derivatives | CAS: 68609-97-2 - EINECS:<br>271-846-8 -<br>INDEX: 603-103-00-4                  | a) Aquatic acute toxicity : EC50 Daphnia = 1,8 mg/L 48h<br>a) Aquatic acute toxicity : LC50 Fish > 100 mg/L 96h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 4-nonylphenol, branched; Isononylphenol                               | CAS: 84852-15-3 - EINECS:<br>284-325-5 -<br>INDEX: 601-053-00-8                  | a) Aquatic acute toxicity : EL50 Daphnia = 7,2 mg/L 48h<br>a) Aquatic acute toxicity : EC50 Algae = 843 mg/L 72h<br>b) Aquatic chronic toxicity : NOEC Algae = 500 mg/L 72h<br>a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 0,135 mg/L 96h IUCLID<br>a) Aquatic acute toxicity : LC50 Fish Lepomis macrochirus = 0,1351 mg/L 96h EPA<br>a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 0,14 mg/L 48h IUCLID<br>a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata 0,36 mg/L 96h EPA<br>a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata 0,16 mg/L 72h EPA<br>b) Aquatic chronic toxicity : NOEC Fish 0,009 mg/L 21d ECHA |

### Persistence and degradability

| Component                                                             | Persitence/Degradability: |
|-----------------------------------------------------------------------|---------------------------|
| alkyl epoxy resin; Oxirane, mono((C12-14-alkyloxy)methyl) derivatives | Readily biodegradable     |

### Bioaccumulative potential

| Component                                                             | Bioaccumulation     | Test                          | Duration | Value |
|-----------------------------------------------------------------------|---------------------|-------------------------------|----------|-------|
| alkyl epoxy resin; Oxirane, mono((C12-14-alkyloxy)methyl) derivatives | Not bioaccumulative |                               |          |       |
| 4-nonylphenol, branched; Isononylphenol                               | Not bioaccumulative | BCF - Bioconcentration factor | 28 d     | 740   |

### Mobility in soil

N.A.

### Other adverse effects

N.A.

## 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: No

#### Transport in bulk according to IMO instruments

N.A.

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

This Safety Data Sheet has been prepared according to the Hazard Communication Standard 2024 (HCS 2024)

#### USA - Federal regulations

##### TSCA - Toxic Substances Control Act

All the components are listed on the TSCA inventory

**TSCA listed substances:**

|                                                                       |                   |                                                            |
|-----------------------------------------------------------------------|-------------------|------------------------------------------------------------|
| bis-[4-(2,3-epoxipropoxy)phenyl]propane                               | is listed in TSCA | Section 8b                                                 |
| alkyl epoxy resin; Oxirane, mono((C12-14-alkyloxy)methyl) derivatives | is listed in TSCA | Section 8b                                                 |
| silica sand; quartz                                                   | is listed in TSCA | Section 8b                                                 |
| 4-nonylphenol, branched; Isononylphenol                               | is listed in TSCA | Section 8b Section 8a - PAIR Section 5a - SNUR Section 12b |

**SARA - Superfund Amendments and Reauthorization Act****Section 302 - Extremely Hazardous Substances:**

No substances listed

**Section 304 - Hazardous substances:**

No substances listed

**Section 313 - Toxic chemical list:**

4-nonylphenol, branched; Isononylphenol

**CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act****Substance(s) listed under CERCLA:**

No substances listed

**CAA - Clean Air Act****CAA listed substances:**

No substances listed

**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:**

silica sand; quartz

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

silica sand; quartz

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

silica sand; quartz

**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: 9/24/2025 - version 12

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.

| <b>Code</b> | <b>Description</b>                                                       |
|-------------|--------------------------------------------------------------------------|
| H302        | Harmful if swallowed.                                                    |
| H314        | Causes severe skin burns and eye damage.                                 |
| H315        | Causes skin irritation.                                                  |
| H317        | May cause an allergic skin reaction.                                     |
| H319        | Causes serious eye irritation.                                           |
| H350        | May cause cancer.                                                        |
| H360F       | May damage fertility.                                                    |
| H361fd      | Suspected of damaging fertility. Suspected of damaging the unborn child. |
| H372        | Causes damage to organs through prolonged or repeated exposure.          |
| H400        | Very toxic to aquatic life.                                              |
| H401        | Toxic to aquatic life                                                    |
| H410        | Very toxic to aquatic life with long lasting effects.                    |
| H411        | Toxic to aquatic life with long lasting effects.                         |

| <b>Code</b> | <b>Hazard class and hazard category</b> | <b>Description</b>                                                     |
|-------------|-----------------------------------------|------------------------------------------------------------------------|
| A.1/4/Oral  | Acute Tox. 4                            | Acute toxicity (oral), Category 4                                      |
| A.2/1B      | Skin Corr. 1B                           | Skin corrosion, Category 1B                                            |
| A.2/2       | Skin Irrit. 2                           | Skin irritation, Category 2                                            |
| A.3/2A      | Eye Irrit. 2A                           | Eye irritation, Category 2A                                            |
| A.4.2/1     | Skin Sens. 1                            | Skin Sensitization, Category 1                                         |
| A.4.2/1B    | Skin Sens. 1B                           | Skin Sensitization, Category 1B                                        |
| A.6/1A      | Carc. 1A                                | Carcinogenicity, Category 1A                                           |
| A.7/1B      | Repr. 1B                                | Reproductive toxicity, Category 1B                                     |
| A.7/2       | Repr. 2                                 | Reproductive toxicity, Category 2                                      |
| A.9/1       | STOT RE 1                               | Specific target organ toxicity following repeated exposure, Category 1 |
| US-HAE/A1   | Aquatic Acute 1                         | Acute aquatic hazard, category 1                                       |
| US-HAE/A2   | Aquatic Acute 2                         | Acute aquatic hazard, category 2                                       |
| US-HAE/C1   | Aquatic Chronic 1                       | Chronic (long term) aquatic hazard, category 1                         |
| US-HAE/C2   | Aquatic Chronic 2                       | Chronic (long term) aquatic hazard, 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.  
 EU CLP Index: Index number as reported in Annex VI to EU Reg. 1272/2008  
 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:**

- 2. HAZARDS IDENTIFICATION

- 3. COMPOSITION/INFORMATION ON INGREDIENTS
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 9. PHYSICAL AND CHEMICAL PROPERTIES
- 11. TOXICOLOGICAL INFORMATION
- 12. ECOLOGICAL INFORMATION
- 14. TRANSPORT INFORMATION
- 16. OTHER INFORMATION