

Safety Data Sheet

MAPEWRAP 12 NA /B

Safety Data Sheet dated: 08/12/2025 - version 8

Date of first edition: 05/12/2015



1. IDENTIFICATION

Product identifier used on the label

Mixture identification:

Trade name: MAPEWRAP 12 NA /B

Trade code: 9073126

Recommended use of the chemical and restrictions on use

Recommended use: Hardener for epoxy products

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 corrosion, Category 1C

Causes severe skin burns and eye damage.

Serious eye damage, Category 1

Causes serious eye damage.

Skin Sensitization, Category 1A

May cause an allergic skin reaction.

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

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

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.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

1

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

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

3

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	UN5\$P308+P313
P310	Immediately call a doctor.
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)

This product contains titanium dioxide which IARC has classified as a Group 2B carcinogen (possibly carcinogenic to humans). Evidence is based on sufficient animal testing as a result of long-term inhalation at high concentrations of respirable amounts of titanium dioxide. 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 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
≥10 - <30 %	trimethylhexamethylenediamine; Trimethylhexane-1,6-diamine	CAS:25620-58-0 EC:247-134-8	Acute Tox. 4, H302; Skin Corr. 1C, H314; Skin Sens. 1A, H317; Aquatic Chronic 3, H412
≥1 - <5 %	bis-[4-(2,3-epoxipropoxy)phenyl]propane	CAS:1675-54-3, 25085-99-8 EC:216-823-5 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
≥1 - <5 %	benzyl alcohol; benzenemethanol	CAS:100-51-6 EC:202-859-9 EU CLP Index:603-057-00-5	Acute Tox. 4, H302; Eye Irrit. 2A, H319
≥1 - <5 %	phenol, styrenated; Petroleum resins	CAS:61788-44-1 EC:262-975-0	Aquatic Chronic 2, H411; Aquatic Acute 1, H400
≥0.1 - <1 %	titanium dioxide; Dioxotitanium	CAS:13463-67-7 EC:236-675-5 EU CLP Index:022-006-00-2	Carc. 2, H351
≥0.1 - <1 %	silica sand; quartz	CAS:14808-60-7 EC:238-878-4	STOT RE 1, H372; Carc. 1A, H350

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 available

Oxidizing properties: Not available

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

Occupational Exposure Limits (OEL)

	OEL Type	Country	Occupational Exposure Limit
benzyl alcohol; benzenemethanol CAS: 100-51-6	MAK	GERMANY	Long Term: 22 mg/m3 - 5 ppm
	MAK	SWITZERLAN D	Long Term: 22 mg/m3 - 5 ppm
titanium dioxide; Dioxotitanium CAS: 13463-67-7	MAK	GERMANY	Long Term: 0.3 mg/m3
	OSHA	AUSTRALIA	Short Term: Ceiling - 10 mg/m3
	ACGIH		Long Term: 10 mg/m3
	MAK	AUSTRIA	Long Term: 5 mg/m3
	MAK	SWITZERLAN D	Long Term: 3 mg/m3; Short Term: 16 mg/m3
silica sand; quartz CAS: 14808-60-7	ACGIH		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	SWITZERLAN D	Long Term: 0.15 mg/m3
	EU		Long Term: 0.1 mg/m3 Behaviour Binding

Predicted No Effect Concentration (PNEC) values

phenol, styrenated; Petroleum resins CAS: 61788-44-1	Exposure Route: Fresh Water; PNEC Limit: 0.001 mg/l
	Exposure Route: Marine water sediments; PNEC Limit: 65778 mg/kg
	Exposure Route: Freshwater sediments; PNEC Limit: 65778 mg/kg
	Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 0.17 mg/l
	Exposure Route: Soil; PNEC Limit: 31525 mg/kg
titanium dioxide; Dioxotitanium CAS: 13463-67-7	Exposure Route: Fresh Water; PNEC Limit: 0.184 mg/l
	Exposure Route: Soil; PNEC Limit: 100 mg/kg
	Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 100 mg/l
	Exposure Route: Marine water; PNEC Limit: 0.0184 mg/l
	Exposure Route: Marine water sediments; PNEC Limit: 100 mg/kg
	Exposure Route: Freshwater sediments; PNEC Limit: 1000 mg/kg
	Exposure Route: Intermittent release; PNEC Limit: 0.193 mg/l

Derived No Effect Level (DNEL) values

phenol, styrenated; Petroleum resins CAS: 61788-44-1	Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects Worker Industry: 11.02 mg/m3; Consumer: 2.717 mg/m3
	Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects

Worker Industry: 6.25 mg/kg; Consumer: 3.125 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 1.562 mg/kg

titanium dioxide;
Dioxotitanium
CAS: 13463-67-7

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Industry: 0.17 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Consumer: 0.028 mg/m³

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 $\geq 0,5\text{mm}$; 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state:	Liquid
Appearance and colour:	paste white
Odour:	No data available
Odour threshold:	No data available
pH (water dispersion, 10%):	No data available
Melting point / freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flammability:	No data available
Upper/lower flammability or explosive limits:	No data available
Flash point:	94 °C (201 °F)
Vapour density:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH:	11.00
Kinematic viscosity:	No data available
Solubility in water:	slightly soluble
Solubility in oil:	No data available
Partition coefficient (n-octanol/water):	No data available
Viscosity:	No data available
Explosive properties:	No data available

Oxidizing properties:	No data available
Solid/gas flammability:	No data available
Vapour pressure:	No data available
Evaporation rate:	No data available
Relative density:	1.55 g/cm ³
Relative vapour density:	No data available

Particle characteristics:

Particle size:	No data available
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Other information

Substance Groups relevant properties:	No data available
Miscibility:	No data available
Fat Solubility:	No data available
Conductivity:	No data available

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	The product is classified: Skin corrosion, Category 1C(H314)
c) serious eye damage/irritation	The product is classified: Serious eye damage, Category 1(H318)
d) respiratory or skin sensitisation	The product is classified: Skin Sensitization, Category 1A(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:

trimethylhexamethylenedi amine; Trimethylhexane-	a) acute toxicity	LD50 Oral Rat = 910 mg/kg
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1,6-diamine

bis-[4-(2,3-epoxipropoxy)phenyl]propane	a) acute toxicity	LD50 Skin Rabbit = 20 mg/kg LD50 Oral Rat = 11300 µL/kg
benzyl alcohol; benzenemethanol	a) acute toxicity	LD50 Oral Rat = 1620 mg/kg
phenol, styrenated; Petroleum resins	a) acute toxicity	LD50 Oral Rat > 2000 mg/kg LD50 Skin Rat > 2000 mg/kg
titanium dioxide; Dioxotitanium	a) acute toxicity	LD50 Oral Rat > 5000 mg/kg LD50 Skin Rat > 2000 mg/m3 LC50 Inhalation Dust Rat > 6.82 mg/l 4h LD50 Skin Rabbit > 10000 mg/kg
silica sand; quartz	a) acute toxicity	LD50 Oral > 2000 mg/kg LD50 Skin > 2000 mg/kg

Substance(s) listed on the IARC Monographs:

bis-[4-(2,3-epoxipropoxy)phenyl]propane	Group 3
titanium dioxide; Dioxotitanium	Group 2B
silica sand; quartz	Group 1

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

titanium dioxide; Dioxotitanium
silica sand; quartz

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

titanium dioxide; Dioxotitanium
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
trimethylhexamethylenediamine; Trimethylhexane-1,6-diamine	CAS: 25620-58-0 - EINECS: 247-134-8	a) Aquatic acute toxicity : EC50 Algae <i>Desmodesmus subspicatus</i> = 29.5 mg/L 72h IUCLID
bis-[4-(2,3-epoxipropoxy)phenyl]propane	CAS: 1675-54-3, 25085-99-8 - EINECS: 216-823-5 - INDEX: 603-073-00-2	a) Aquatic acute toxicity : LC50 Fish = 2 mg/L 96h

benzyl alcohol; benzenemethanol	CAS: 100-51-6 - EINECS: 202-859-9 - INDEX: 603-057-00-5	a) Aquatic acute toxicity : EC50 Daphnia = 1.8 mg/L 48h
		a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 460 mg/L 96h EPA
phenol, styrenated; Petroleum resins	CAS: 61788-44-1 - EINECS: 262-975-0	a) Aquatic acute toxicity : EC50 Daphnia = 4.6 mg/L 48 ECHA
titanium dioxide; Dioxotitanium	CAS: 13463-67-7 - EINECS: 236-675-5 - INDEX: 022-006-00-2	a) Aquatic acute toxicity : LC50 Fish = 5.6 mg/L 96h ECHA
		a) Aquatic acute toxicity : LC50 Fish > 100 mg/L 96
		a) Aquatic acute toxicity : EC50 Algae = 16 mg/L 72
		a) Aquatic acute toxicity : NOEC Algae = 5600 mg/L 72
		a) Aquatic acute toxicity : EC50 Daphnia > 100 mg/L 48

Persistence and degradability

N.A.

Bioaccumulative potential

N.A.

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.

14. TRANSPORT INFORMATION

UN number

DOT-UN Number: UN2735

ADR-UN number: 2735

IATA-Un number: 2735

IMDG-Un number: 2735

UN proper shipping name

DOT-Proper Shipping Name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (trimethylhexamethylenediamine)

ADR-Shipping Name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (trimethylhexamethylenediamine)

IATA-Technical name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (trimethylhexamethylenediamine)

IMDG-Technical name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (trimethylhexamethylenediamine)

Transport hazard class(es)

DOT-Hazard Class: 8

ADR-Class: 8

IATA-Class: 8

IMDG-Class: 8

Packing group

DOT Packing Group: III

ADR-Packing Group: III

IATA-Packing group: III

IMDG-Packing group: III

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):

DOT-Special Provision(s): IB3, T7, TP1, TP28

DOT-Label(s): 8

DOT-Symbol: N/A

DOT-Cargo Aircraft: 60 L

DOT-Passenger Aircraft: 5 L

DOT-Bulk: 241

DOT-Non-Bulk: 203

DOT-Limited Quantity threshold: 5 L

Road and Rail (ADR-RID) :

ADR-Label: 8

ADR-Hazard identification number: 80

ADR-Transport category (Tunnel restriction code): 3 (E)

Air (IATA) :

IATA-Passenger Aircraft: 852

IATA-Cargo Aircraft: 856

IATA-Label: 8

IATA-Subsidiary hazards: -

IATA-Erg: 8L

IATA-Special Provisioning: A3 A803

Sea (IMDG) :

IMDG-Stowage and handling: Category A

IMDG-Segregation: SG35 SGG18

IMDG-Subsidiary hazards: -

IMDG-Special Provisioning: 223 274

IMDG-EMS: F-A, S-B

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:

trimethylhexamethylenediamine; is listed in TSCA Section 8b
Trimethylhexane-1,6-diamine

bis-[4-(2,3-epoxipropoxy)phenyl]propane is listed in TSCA Section 8b

benzyl alcohol; benzenemethanol is listed in TSCA Section 8b

phenol, styrenated; Petroleum resins is listed in TSCA Section 8a - PAIR Section 8b

titanium dioxide; Dioxotitanium is listed in TSCA Section 8b

silica sand; quartz is listed in TSCA Section 8b

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:

No substances listed

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

No substances listed

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

benzyl alcohol; benzenemethanol is listed in CAA 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:**

titanium dioxide; Dioxotitanium Listed as carcinogen

silica sand; quartz Listed as carcinogen

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

benzyl alcohol; benzenemethanol

titanium dioxide; Dioxotitanium

silica sand; quartz

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

benzyl alcohol; benzenemethanol

titanium dioxide; Dioxotitanium

silica sand; quartz

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

trimethylhexamethylenediamine; Trimethylhexane-1,6-diamine

titanium dioxide; Dioxotitanium

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

16. OTHER INFORMATION

Safety Data Sheet dated: 8/12/2025 - version 8

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
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.
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H401	Toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Code	Hazard class and hazard category	Description
A.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
A.2/1C	Skin Corr. 1C	Skin corrosion, Category 1C
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.4.2/1A	Skin Sens. 1A	Skin Sensitization, Category 1A
A.6/1A	Carc. 1A	Carcinogenicity, Category 1A
A.6/2	Carc. 2	Carcinogenicity, 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/C2	Aquatic Chronic 2	Chronic (long term) aquatic hazard, category 2
US-HAE/C3	Aquatic Chronic 3	Chronic (long term) aquatic hazard, category 3

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
- 14. TRANSPORT INFORMATION
- 16. OTHER INFORMATION