

Safety Data Sheet

PLANISEAL VS FAST / B

Safety Data Sheet dated: 08/13/2025 - version 7

Date of first edition: 05/27/2015



1. IDENTIFICATION

Product identifier used on the label

Mixture identification:

Trade name: PLANISEAL VS FAST / B

Trade code: 9024372

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

Acute toxicity (oral), Category 4

Skin corrosion, Category 1A

Serious eye damage, Category 1

Skin Sensitization, Category 1A

Reproductive toxicity, Category 2

Acute aquatic hazard, category 3

Chronic (long term) aquatic hazard, category 1

Harmful if swallowed.

Causes severe skin burns and eye damage.

Causes serious eye damage.

May cause an allergic skin reaction.

Suspected of damaging fertility. Suspected of damaging the unborn child.

Harmful to aquatic life

Very toxic to aquatic life with long lasting effects.

Label elements

Hazard pictograms and Signal Word



Danger

Hazard statements

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.

H402 Harmful to aquatic life

H410 Very toxic 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.

P270 Do not eat, drink or smoke when using this product.

- P273 Avoid release to the environment.
- P280 Wear protective gloves/clothing and eye/face protection.
- P301+P312 IF SWALLOWED: Call a doctor if you feel unwell.
- 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.
- 8
- P308+P313 IF exposed or concerned: Call a POISON CENTER/ doctor/...
- 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.
- P391 Collect spillage.
- 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

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
≥15 - <40 %	1,3-benzenedimethanamine; m-phenylenebis(methylamine)	CAS:1477-55-0 EC:216-032-5	Acute Tox. 4, H332; Acute Tox. 4, H302; Aquatic Chronic 3, H412; Aquatic Acute 3, H402; Skin Corr. 1B, H314; Skin Sens. 1B, H317
≥10 - <30 %	p-tert-butyl phenol; 1-Hydroxy-4-tert-butylbenzene	CAS:98-54-4 EC:202-679-0 EU CLP Index:604-090-00-8	Skin Irrit. 2, H315; Eye Dam. 1, H318; Repr. 2, H361f; Aquatic Chronic 1, H410
≥5 - <10 %	2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine; Trimethyl-1,6-hexanediamine	CAS:25513-64-8 EC:247-063-2	Acute Tox. 4, H302; Skin Corr. 1A, H314; Skin Sens. 1A, H317
≥3 - <7 %	2,4,6-tri(dimethylaminomethyl)phenol; Mesitol, alpha2,alpha4,alpha6-tris(dimethylamino)-	CAS:90-72-2 EC:202-013-9 EU CLP Index:603-069-00-0	Skin Corr. 1C, H314; Eye Dam. 1, H318; 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:

Give nothing to eat or drink.

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
1,3-benzenedimethanamine; m-phenylenebis(methylamine) CAS: 1477-55-0	ACGIH		Short Term: Ceiling - 0.1 mg/m ³ Skin - Eye, skin, and GI irr
	ACGIH		Short Term: Ceiling - 0.1 mg/m ³
	ACGIH		Skin - potential significant contribution to overall exposure by the cutaneous route;eye, gastrointestinal and skin irritation
	MAK	AUSTRIA	Long Term: 0.1 mg/m ³ ; Short Term: 0.1 mg/m ³
	MAK	SWITZERLAND	Long Term: 0.1 mg/m ³
	MAK	AUSTRIA	Short Term: Ceiling - 0.1 mg/m ³
	ACGIH		Short Term: Ceiling - 0.1 mg/m ³
	ACGIH		Skin - potential significant contribution to overall exposure by the cutaneous route;eye, gastrointestinal and skin irritation
	ACGIH		Short Term: Ceiling - 0.018 ppm
	p-tert-butyl phenol; 1-Hydroxy-4-tert-butylbenzene CAS: 98-54-4	MAK	GERMANY
MAK		AUSTRIA	Long Term: 0.5 mg/m ³ - 0.08 ppm; Short Term: 2.5 mg/m ³ - 0.4 ppm
MAK		SWITZERLAND	Long Term: 0.5 mg/m ³ - 0.08 ppm

Predicted No Effect Concentration (PNEC) values

1,3-benzenedimethanamine; m-phenylenebis(methylamine) CAS: 1477-55-0	Exposure Route: Fresh Water; PNEC Limit: 0.094 mg/kg
	Exposure Route: Marine water; PNEC Limit: 0.0094 mg/l
	Exposure Route: Freshwater sediments; PNEC Limit: 0.43 mg/kg
	Exposure Route: Marine water sediments; PNEC Limit: 0.043 mg/kg
	Exposure Route: Intermittent release; PNEC Limit: 0.152 mg/l
	Exposure Route: Soil; PNEC Limit: 0.045 mg/kg
	Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 10 mg/l
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine; Trimethyl-1,6-hexanediamine CAS: 25513-64-8	Exposure Route: Fresh Water; PNEC Limit: 0.102 mg/l
	Exposure Route: Freshwater sediments; PNEC Limit: 0.622 mg/kg
	Exposure Route: Marine water; PNEC Limit: 0.01 mg/l
	Exposure Route: Marine water sediments; PNEC Limit: 0.062 mg/kg
	Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 72 mg/l
	Exposure Route: Soil; PNEC Limit: 10 mg/kg

Derived No Effect Level (DNEL) values

1,3-benzenedimethanamine; m-phenylenebis(methylamine)	Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects Worker Industry: 0.33 mg/kg
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CAS: 1477-55-0

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Industry: 1.2 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Industry: 0.2 mg/m³

2,4,6-tri(dimethylaminomethyl) phenol; Mesityl, alpha2,alpha4,alpha6-tris(dimethylamino)-
CAS: 90-72-2
Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Industry: 0.31 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:	yellow
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:	200 °C (392 °F)
Flammability:	No data available
Upper/lower flammability or explosive limits:	No data available
Flash point:	100 °C (212 °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:	dispersible
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:	1.00 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	The product is classified: Acute toxicity (oral), Category 4(H302) ATEmix - Oral : 1779.6 mg/kg bw
b) skin corrosion/irritation	The product is classified: Skin corrosion, Category 1A(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	The product is classified: Reproductive toxicity, Category 2(H361)
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:

1,3-benzenedimethanamine; m-phenylenebis(methylamine) a) acute toxicity LD50 Oral Mouse = 930 mg/kg
LD50 Skin Rabbit = 2000 mg/kg
LC50 Inhalation Mist Rat = 1.34 mg/l 4h
LC50 Inhalation Rat = 700 ppm 1h

p-tert-butyl phenol; 1-Hydroxy-4-tert-butylbenzene a) acute toxicity LD50 Skin Rabbit = 2318 mg/kg
LD50 Oral Rat = 2990 mg/kg

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine; Trimethyl-1,6-hexanediamine a) acute toxicity LD50 Oral Rat = 910 mg/kg

2,4,6-tri(dimethylaminomethyl) phenol; Mesityl, alpha2,alpha4,alpha6-tris(dimethylamino)- a) acute toxicity LD50 Oral Rat = 2169 mg/kg
LD50 Skin Rat > 1 ml/kg

Substance(s) listed on the IARC Monographs:

None

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

None

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

None

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

None

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 1(H410)

List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
1,3-benzenedimethanamine; m-phenylenebis(methylamine)	CAS: 1477-55-0 - EINECS: 216-032-5	a) Aquatic acute toxicity : EC50 Algae = 20 mg/L 72h a) Aquatic acute toxicity : EC50 Daphnia = 15.2 mg/L 48h a) Aquatic acute toxicity : LC50 Fish Oryzias latipes = 87.6 mg/L 96h ECHA
p-tert-butyl phenol; 1-Hydroxy-4-tert-butylbenzene	CAS: 98-54-4 - EINECS: 202-679-0 - INDEX: 604-090-00-8	a) Aquatic acute toxicity : LC50 Fish Pimephales promelas 4.71 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Fish Cyprinus carpio = 6.9 mg/L 96h EPA a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 3.9 mg/L 48h IUCLID

a) Aquatic acute toxicity : EC50 Algae Desmodesmus subspicatus = 14 mg/L
72h IUCLID

2,2,4(or 2,4,4)-trimethylhexane-
1,6-diamine; Trimethyl-1,6-
hexanediamine

CAS: 25513-64-
8 - EINECS:
247-063-2

a) Aquatic acute toxicity : LC50 Fish = 174 mg/L 48

a) Aquatic acute toxicity : EC50 Daphnia = 31.5 mg/L 24

a) Aquatic acute toxicity : EC50 Algae = 43.5 mg/L 72

a) Aquatic acute toxicity : NOEC Algae = 16 mg/L 72

c) Bacteria toxicity : EC50 Bacteria = 89 mg/L 17

b) Aquatic chronic toxicity : NOEC Fish = 10.9 mg/L - 34 d

b) Aquatic chronic toxicity : NOEC Daphnia = 1.02 mg/L - 21 d

d) Terrestrial toxicity : NOEC = 1000 mg/kg - 28 d

2,4,6-
tri(dimethylaminomethyl)phenol;
Mesitol, alpha2,alpha4,alpha6-
tris(dimethylamino)-

CAS: 90-72-2 -
EINECS: 202-
013-9 - INDEX:
603-069-00-0

a) Aquatic acute toxicity : LC50 Fish = 175 mg/L 96h

a) Aquatic acute toxicity : EC50 Algae = 46.7 mg/L 72h

a) Aquatic acute toxicity : NOEC Algae = 25.1 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

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: AMINES, LIQUID, CORROSIVE, N.O.S. (m-xylylendiamine - paratertiarybutylphenol)

ADR-Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S. (m-xylylendiamine - paratertiarybutylphenol)

IATA-Technical name: AMINES, LIQUID, CORROSIVE, N.O.S. (m-xylylendiamine - paratertiarybutylphenol)

IMDG-Technical name: AMINES, LIQUID, CORROSIVE, N.O.S. (m-xylylendiamine - paratertiarybutylphenol)

Transport hazard class(es)

DOT-Hazard Class: 8

ADR-Class: 8

IATA-Class: 8

IMDG-Class: 8

Packing group

DOT Packing Group: II

ADR-Packing Group: II

IATA-Packing group: II

IMDG-Packing group: II

Environmental hazards

Marine pollutant: Yes

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): B2, IB2, T11, TP1, TP27

DOT-Label(s): 8

DOT-Symbol: N/A

DOT-Cargo Aircraft: N/A

DOT-Passenger Aircraft: N/A

DOT-Bulk: N/A

DOT-Non-Bulk: N/A

DOT-Limited Quantity threshold: 1 L

Road and Rail (ADR-RID) :

ADR-Label: 8

ADR-Hazard identification number: 80

ADR-Transport category (Tunnel restriction code): 2 (E)

Air (IATA) :

IATA-Passenger Aircraft: 851

IATA-Cargo Aircraft: 855

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: 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:

1,3-benzenedimethanamine; m-phenylenebis(methylamine) is listed in TSCA Section 8b

p-tert-butyl phenol; 1-Hydroxy-4-tert-butylbenzene is listed in TSCA Section 8b Section 8a - PAIR

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine; Trimethyl-1,6-hexanediamine is listed in TSCA Section 8b

2,4,6-tri(dimethylaminomethyl)phenol; Mesitol, alpha2,alpha4,alpha6-

tris(dimethylamino)-

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:

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:

No substances listed

Massachusetts Right to know

Substance(s) listed under Massachusetts Right to know:

1,3-benzenedimethanamine; m-phenylenebis(methylamine)

Pennsylvania Right to know

Substance(s) listed under Pennsylvania Right to know:

1,3-benzenedimethanamine; m-phenylenebis(methylamine)

New Jersey Right to know

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

1,3-benzenedimethanamine; m-phenylenebis(methylamine)

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: 8/13/2025 - version 7

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.
H318	Causes serious eye damage.

H332	Harmful if inhaled.
H361f	Suspected of damaging fertility.
H402	Harmful to aquatic life
H410	Very 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/Inhal	Acute Tox. 4	Acute toxicity (inhalation), Category 4
A.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
A.2/1A	Skin Corr. 1A	Skin corrosion, Category 1A
A.2/1B	Skin Corr. 1B	Skin corrosion, Category 1B
A.2/1C	Skin Corr. 1C	Skin corrosion, Category 1C
A.2/2	Skin Irrit. 2	Skin irritation, Category 2
A.3/1	Eye Dam. 1	Serious eye damage, Category 1
A.4.2/1A	Skin Sens. 1A	Skin Sensitization, Category 1A
A.4.2/1B	Skin Sens. 1B	Skin Sensitization, Category 1B
A.7/2	Repr. 2	Reproductive toxicity, Category 2
US-HAE/A3	Aquatic Acute 3	Acute aquatic hazard, category 3
US-HAE/C1	Aquatic Chronic 1	Chronic (long term) aquatic hazard, category 1
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:

- 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
- 11. TOXICOLOGICAL INFORMATION
- 12. ECOLOGICAL INFORMATION
- 14. TRANSPORT INFORMATION
- 15. REGULATORY INFORMATION

- 16. OTHER INFORMATION