

## Safety Data Sheet

### PRIMER E / B

Safety Data Sheet dated: 09/24/2025 - version 9

Date of first edition: 05/18/2015



## 1. IDENTIFICATION

### Product identifier used on the label

Mixture identification:

Trade name: PRIMER E / B

Trade code: 9074931

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

Recommended use: Primer

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

Serious eye damage, Category 1

Causes serious eye damage.

Skin Sensitization, Category 1

May cause an allergic skin reaction.

Reproductive toxicity, Category 2

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

Acute aquatic hazard, category 1

Very toxic to aquatic life.

Chronic (long term) aquatic hazard, category 1

Very toxic to aquatic life with long lasting effects.

Skin corrosion, Category 1C

Causes severe skin burns and eye damage.

### 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.

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

H400 Very toxic 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.

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 IF exposed or concerned: Get medical advice/attention.
- 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
≥40 - <50 %	4-nonylphenol, branched; Isononylphenol	CAS:84852-15-3 EC:284-325-5 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
≥30 - <36 %	fatty acids, tall-oil, polymers with bisphenol a, diethylenetriamine, epichlorohydrin and tetraethylenepentamine;	CAS:68951-85-9 EC:620-444-4	Skin Irrit. 2, H315; Eye Irrit. 2A, H319
≥20 - <25 %	triethylenetetramine	CAS:112-24-3 EC:203-950-6 EU CLP Index:612-059-00-5	Skin Corr. 1B, H314; Skin Sens. 1, H317; Aquatic Chronic 3, H412; Acute Tox. 4, H312
≥2.5 - <3 %	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
≥0.6 - <1 %	tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine	CAS:112-57-2 EC:203-986-2 EU CLP Index:612-060-00-0	Skin Corr. 1B, H314; Skin Sens. 1, H317; Aquatic Chronic 2, H411; Acute Tox. 4, H302; Acute Tox. 4, H312

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

### 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.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

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

4-nonylphenol, branched; Exposure Route: Fresh Water; PNEC Limit: 0,000614 mg/l  
Isononylphenol  
CAS: 84852-15-3

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

tetraethylenepentamine; Exposure Route: Fresh Water; PNEC Limit: 0,00068 mg/l  
3,6,9-  
triazoundecamethylenedia  
mine  
CAS: 112-57-2

Exposure Route: Marine water; PNEC Limit: 0,00068 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 3,34 mg/kg

Exposure Route: Marine water sediments; PNEC Limit: 0,343 mg/kg

Exposure Route: Soil; PNEC Limit: 0,683 mg/kg

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

4-nonylphenol, branched; Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects  
Isononylphenol  
CAS: 84852-15-3  
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

triethylenetetramine  
CAS: 112-24-3  
Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects  
Worker Industry: 5380 mg/m<sup>3</sup>; Consumer: 1600 mg/m<sup>3</sup>

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects  
Worker Industry: 0,57 mg/kg

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects  
Worker Industry: 1 mg/m<sup>3</sup>; Consumer: 0,29 mg/m<sup>3</sup>

Exposure Route: Human Dermal; Exposure Frequency: Long Term, local effects  
Worker Industry: 0,028 mg/m<sup>3</sup>; Consumer: 0,43 mg/cm<sup>2</sup>

Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects  
Consumer: 8 mg/kg

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

Exposure Route: Human Dermal; Exposure Frequency: Short Term, local effects  
Consumer: 1 mg/cm<sup>2</sup>

Exposure Route: Human Oral; Exposure Frequency: Long Term, local effects  
Consumer: 0,43 mg/cm<sup>2</sup>

2,4,6-  
tri(dimethylaminomethyl)  
phenol; Mesitol,  
alpha2,alpha4,alpha6-  
tris(dimethylamino)-  
CAS: 90-72-2  
Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects  
Worker Industry: 0,31 mg/m<sup>3</sup>

tetraethylenepentamine; Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects  
3,6,9- Consumer: 10 mg/kg  
triazoundecamethylenedia  
mine  
CAS: 112-57-2

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects  
Worker Professional: 0,74 mg/kg

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects  
Consumer: 0,32 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects  
Consumer: 0,53 mg/kg

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects  
Worker Professional: 0,00129 mg/l

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects  
Consumer: 0,00038 mg/l

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:	liquid yellow
Odour:	ammonia
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)
Auto-ignition temperature:	Not Relevant
Decomposition temperature:	Not Relevant
pH:	Not Relevant
Viscosity:	1,330.00 mPA-s
Kinematic viscosity:	> 20,5 mm <sup>2</sup> /sec (40 °C)
Solubility in water:	partly soluble

Solubility in oil:	partly soluble
Partition coefficient (n-octanol/water):	Not Relevant
Vapour pressure:	Not Relevant
Evaporation rate:	Not Relevant
Relative density:	0.97 g/cm <sup>3</sup>
Vapour density:	Not Relevant

**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

**10. STABILITY AND REACTIVITY**

**Reactivity**

Stable under normal conditions

**Chemical stability**

Data not available.

**Possibility of hazardous reactions**

It may generate flammable gases on contact with elementary metals (alkalis and alkaline earth) and powerful reducing agents.  
 It may generate toxic gases on contact with oxidising mineral acids, halogenated organic substances, organic peroxides and hydroperoxides, and powerful oxidising agents.  
 It may catch fire on contact with powerful oxidising agents.

**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 1(H317)
e) germ cell mutagenicity	Not classified Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified Based on available data, the classification criteria are not met
g) reproductive toxicity	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



a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 31,1 mg/L 48h IUCLID

a) Aquatic acute toxicity : EC50 Algae Desmodesmus subspicatus = 2,5 mg/L 72h IUCLID

a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata = 20 mg/L 72h IUCLID

a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata = 3,7 mg/L 96h EPA

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

tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine

CAS: 112-57-2 -  
EINECS: 203-986-2 - INDEX: 612-060-00-0

a) Aquatic acute toxicity : LC50 Fish Poecilia reticulata = 420 mg/L 96h IUCLID

a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 24,1 mg/L 48h IUCLID

a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata = 2,1 mg/L 72h IUCLID

### Persistence and degradability

N.A.

### Bioaccumulative potential

#### Component

4-nonylphenol, branched; Isononylphenol

Bioaccumulation

Not bioaccumulative

#### Test

BCF - Bioconcentration factor

#### Duration

28 d

#### Value

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.

---

## 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. (nonylphenol mixture - triethylenetetramine)  
ADR-Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S. (nonylphenol mixture - triethylenetetramine)  
IATA-Technical name: AMINES, LIQUID, CORROSIVE, N.O.S. (nonylphenol mixture - triethylenetetramine)  
IMDG-Technical name: AMINES, LIQUID, CORROSIVE, N.O.S. (nonylphenol mixture - triethylenetetramine)

**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: 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): 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:**

4-nonylphenol, branched; is listed in TSCA Section 8b Section 8a - PAIR Section 5a -  
Isononylphenol SNUR Section 12b

fatty acids, tall-oil, polymers with bisphenol a, diethylenetriamine, epichlorohydrin and tetraethylenepentamine; is listed in TSCA Section 8b

triethylenetetramine is listed in TSCA Section 8b

2,4,6-tri(dimethylaminomethyl)phenol; Mesitol, alpha2,alpha4,alpha6-tris(dimethylamino)- is listed in TSCA Section 8b

tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine 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:**

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:**

tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine 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:**

No substances listed

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

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

triethylenetetramine

tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine

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

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

triethylenetetramine

tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine

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

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

triethylenetetramine

tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine

#### **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: 9/24/2025 - version 9

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.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
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/Dermal	Acute Tox. 4	Acute toxicity (dermal), Category 4
A.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
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.3/2A	Eye Irrit. 2A	Eye irritation, Category 2A
A.4.2/1	Skin Sens. 1	Skin Sensitization, Category 1
A.7/2	Repr. 2	Reproductive toxicity, Category 2
US-HAE/A1	Aquatic Acute 1	Acute aquatic hazard, category 1
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
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
- 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