

Safety Data Sheet

ULTRABOND G-19 PART B

Safety Data Sheet dated: 08/29/2023 - version 9

Date of first edition: 05/13/2015



1. IDENTIFICATION

Product identifier

Mixture identification:

Trade name: ULTRABOND G-19 PART B

Trade code: 9024856

Recommended use of the chemical and restrictions on use

Recommended use: Hardener for epoxy-polyurethane based adhesives or sealants

Restrictions on use: Not available

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

Company: MAPEI CORP. (USA and Puerto Rico)

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

Phone: 954-246-8888

Responsible: RDProductSafety@mapei.com

Emergency 24 hour numbers:

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

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

2. HAZARD(S) IDENTIFICATION



Classification of the chemical

Skin corrosion, Category 1B

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.

Reproductive toxicity, Category 1B

May damage fertility or the unborn child.

Acute aquatic hazard, category 3

Harmful to aquatic life

Chronic (long term) aquatic hazard, category 1

Very toxic 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.

H360 May damage fertility or 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.

P272 Contaminated work clothing must not be allowed out of the workplace.

P273 Avoid release to the environment.

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

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

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/shower.
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.
P321	Specific treatment (see supplementary instructions on this label).
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/container in accordance with applicable regulations.

Ingredient(s) with unknown acute toxicity:

None

Hazards not otherwise classified identified during the classification process:

None

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	Registration Number
25-50 %	diisopropyl naphthalene; Bis(isopropyl)naphthalene	CAS:38640-62-9 EC:254-052-6	Asp. Tox. 1, H304; Aquatic Chronic 1, H410	
20-25 %	2,4,6-tri(dimethylaminomethyl)phenol; Mesityl, alpha2,alpha4,alpha6-tris(dimethylamino)-	CAS:90-72-2 EC:202-013-9 Index:603-069-00-0	Skin Corr. 1B, H314; Skin Sens. 1A, H317; Aquatic Chronic 3, H412	
10-20 %	bisphenol a, epichlorohydrin, triethylenetetramine polymer; 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with triethylenetetramine	CAS:38294-69-8 EC:500-104-0	Acute Tox. 4, H312; Skin Corr. 1B, H314; Aquatic Chronic 3, H412; Skin Sens. 1, H317	
10-20 %	isophorone diamine; 3-aminomethyl-3,5,5-trimethylcyclohexylamine	CAS:2855-13-2 EC:220-666-8 Index:612-067-00-9	Skin Corr. 1B, H314; Skin Sens. 1, H317; Aquatic Chronic 3, H412; Acute Tox. 4, H302; Acute Tox. 4, H312	
5-10 %	salicylic acid; 2-Hydroxybenzoic acid	CAS:69-72-7 EC:200-712-3 Index:607-732-00-5	Acute Tox. 4, H302; Eye Dam. 1, H318	
2.5-5 %	bis[(dimethylamino)methyl]phenol;	CAS:71074-89-0 EC:275-162-0	Skin Corr. 1B, H314	
1-2.5 %	aminoethylpiperazine; 2-piperazin-1-ylethylamine	CAS:140-31-8 EC:205-411-0 Index:612-105-00-4	Acute Tox. 3, H311; Skin Corr. 1B, H314; Skin Sens. 1, H317; Eye Dam. 1, H318; Repr. 1B, H360	
1-2.5 %	tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine	CAS:112-57-2 EC:203-986-2 Index:612-060-00-0	Skin Sens. 1, H317; Aquatic Chronic 2, H411; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Corr. 1B, H314	

1-2.5 % pentaethylenehexamine; 3,6,9,12-tetra-azatetradecamethylenediamine CAS:4067-16-7 EC:223-775-9 Index:612-064-00-2 Acute Tox. 4, H302; Skin Corr. 1B, H314; Eye Dam. 1, H318; Skin Sens. 1, H317; Aquatic Acute 1, H400; Aquatic Chronic 1, H410

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

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

No data available

Appropriate engineering controls: Not available

Individual protection measures

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Suitable materials for safety gloves; 29 CFR 1910.138 - ANSI/ISEA 105:

Polychloroprene - CR: thickness $\geq 0,5\text{mm}$; breakthrough time $\geq 480\text{min}$.

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

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

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

Use impervious gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Respiratory protection must be used where exposure levels exceed workplace exposure limits. Refer to 29 CFR 1910.134 - CSA Z94.4 for information on selection and use of appropriate respiratory protection equipment.

Use adequate protective respiratory equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state: Liquid

Appearance and colour: liquid yellow

Odour: like: Amines

Odour threshold: Not Relevant

pH: Not Relevant

Melting point / freezing point: Not Relevant

Initial boiling point and boiling range: Not Relevant

Flash point: 94 °C (201 °F)

Evaporation rate: 0.99 % w/w

Upper/lower flammability or explosive limits: Not Relevant

Vapour density: Not Relevant

Vapour pressure: Not Relevant

Relative density: 0.99 g/cm³

Solubility in water: Not Relevant

Solubility in oil: Not Relevant

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

Auto-ignition temperature: Not Relevant

Decomposition temperature: Not Relevant

Viscosity: Not Relevant

Explosive properties: Not Relevant

Oxidizing properties: Not Relevant

Solid/gas flammability: Not Relevant

Other information

Substance Groups relevant properties Not Relevant

Miscibility: Not Relevant

Fat Solubility: Not Relevant

Conductivity: Not Relevant

10. STABILITY AND REACTIVITY

Reactivity

Stable under normal conditions

Chemical stability

Data not available.

Possibility of hazardous reactions

None.

Conditions to avoid

Stable under normal conditions.

Incompatible materials

None in particular.

Hazardous decomposition products

None.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Toxicological Information of the Preparation

a) acute toxicity	Not classified Based on available data, the classification criteria are not met
b) skin corrosion/irritation	The product is classified: Skin corrosion, Category 1B(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 1B(H360)
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:

diisopropylnaphthalene; Bis(isopropyl)naphthalene	a) acute toxicity	LD50 Skin Rat > 4500 mg/kg LC50 Inhalation Rat > 5.64 mg/l 4h LD50 Oral Rat = 3900 mg/kg
2,4,6- tri(dimethylaminomethyl) phenol; Mesityl, alpha2,alpha4,alpha6- tris(dimethylamino)-	a) acute toxicity	LD50 Skin Rat = 1280 mg/kg LD50 Oral Rat = 1000 mg/kg LD50 Skin Rat = 1280 mg/kg LD50 Oral Rat = 1200 mg/kg
isophorone diamine; 3-	a) acute toxicity	LD50 Oral Rat = 1030 mg/kg

aminomethyl-3,5,5-trimethylcyclohexylamine

LD50 Skin Rat > 2000 mg/kg

LD50 Oral Rat = 1030 mg/kg

salicylic acid; 2-Hydroxybenzoic acid

a) acute toxicity

LD50 Oral Rat = 891 mg/kg

LC50 Inhalation Rat > 900 mg/m³ 1h

LD50 Skin Rat > 2 g/kg

aminoethylpiperazine; 2-piperazin-1-ylethylamine

a) acute toxicity

LD50 Skin Rabbit = 880 µL/kg

LD50 Oral Rat = 2140 mg/kg

LD50 Oral Rat = 2140 µL/kg

LD50 Skin Rabbit = 880 µL/kg

tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine

a) acute toxicity

LD50 Skin Rabbit = 660 µL/kg

LD50 Oral Rat = 2100 mg/kg

LD50 Skin Rabbit = 660 µL/kg

LD50 Oral Rat = 3990 mg/kg

pentaethylenehexamine; 3,6,9,12-tetra-azatetradecamethylenediamine

a) acute toxicity

LD50 Oral Rat = 1600 mg/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

diisopropyl-naphthalene;
Bis(isopropyl)naphthalene

CAS: 38640-62-9 - EINECS:
254-052-6

a) Aquatic acute toxicity : LC50 Fish Cyprinus carpio > 1000 mg/L 96h

a) Aquatic acute toxicity : LC50 Fish Oryzias latipes > 1000 mg/L 96h

isophorone diamine; 3-aminomethyl-3,5,5-trimethylcyclohexylamine

CAS: 2855-13-2 - EINECS: 220-666-8 - INDEX:
612-067-00-9

a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna 14.6 mg/L 48h EPA

		a) Aquatic acute toxicity : EC50 Daphnia magna = 42 mg/L - 24hr
		a) Aquatic acute toxicity : EC50 Algae Desmodesmus subspicatus = 37 mg/L 72h IUCLID
		a) Aquatic acute toxicity : EC50 Algae idus = 110 mg/L 96h
salicylic acid; 2-Hydroxybenzoic acid	CAS: 69-72-7 - EINECS: 200-712-3 - INDEX: 607-732-00-5	a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 870 mg/L 48h EPA
aminoethylpiperazine; 2-piperazin-1-ylethylamine	CAS: 140-31-8 - EINECS: 205-411-0 - INDEX: 612-105-00-4	a) Aquatic acute toxicity : LC50 Fish Pimephales promelas 1950 mg/L 96h EPA
		a) Aquatic acute toxicity : LC50 Fish Poecilia reticulata > 1000 mg/L 96h IUCLID
		a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss >= 100 mg/L 96h IUCLID
		a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 32 mg/L 48h IUCLID
		a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata = 495 mg/L 72h IUCLID
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

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: UN1760

ADR-UN number: 1760

IATA-Un number: 1760

IMDG-Un number: 1760

UN proper shipping name

DOT-Proper Shipping Name: Corrosive liquids, n.o.s. (trisdimethylaminomethylphenol - bis(isopropyl)naphthalene)

ADR-Shipping Name: CORROSIVE LIQUID, N.O.S. (trisdimethylaminomethylphenol - bis(isopropyl)naphthalene)

IATA-Technical name: CORROSIVE LIQUID, N.O.S. (trisdimethylaminomethylphenol - bis(isopropyl)naphthalene)

IMDG-Technical name: CORROSIVE LIQUID, N.O.S. (trisdimethylaminomethylphenol - bis(isopropyl)naphthalene)

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: Not Applicable

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not Applicable

Special precautions

Department of Transportation (DOT):

DOT-Special Provision(s): B2, IB2, T11, TP2, 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

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 Code: Category B SW2

IMDG-Stowage Note: -

IMDG-Subsidiary hazards: -

IMDG-Special Provisioning: 274

IMDG-EMS: F-A, S-B

15. REGULATORY INFORMATION

USA - Federal regulations

TSCA - Toxic Substances Control Act

All the components are listed on the TSCA inventory

TSCA listed substances:

diisopropyl naphthalene; Bis(isopropyl)naphthalene is listed in TSCA Section 8b

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

bisphenol a, epichlorohydrin, triethylenetetramine polymer; 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with triethylenetetramine is listed in TSCA Section 8b

isophorone diamine; 3-aminomethyl-3,5,5-trimethylcyclohexylamine is listed in TSCA Section 8b

salicylic acid; 2-Hydroxybenzoic acid is listed in TSCA Section 8b

aminoethylpiperazine; 2-piperazin-1-ylethylamine is listed in TSCA Section 8b

tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine is listed in TSCA Section 8b

pentaethylenehexamine; 3,6,9,12-tetraazatetradecamethylenediamine 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:

salicylic acid; 2-Hydroxybenzoic acid is listed in CAA Section 112(b) - HON

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:

aminoethylpiperazine; 2-piperazin-1-ylethylamine
tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine

Pennsylvania Right to know

Substance(s) listed under Pennsylvania Right to know:

aminoethylpiperazine; 2-piperazin-1-ylethylamine

tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine

New Jersey Right to know

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

isophorone diamine; 3-aminomethyl-3,5,5-trimethylcyclohexylamine
aminoethylpiperazine; 2-piperazin-1-ylethylamine
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

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Additional classification information

NFPA Health: 3 = Serious

NFPA Flammability: 1 = Combustible if heated

NFPA Reactivity: 1 = Slight

NFPA Special Risk: N.A.



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.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H360	May damage fertility or 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.1/3/Dermal	Acute Tox. 3	Acute toxicity (dermal), Category 3
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.10/1	Asp. Tox. 1	Aspiration hazard, Category 1
A.2/1B	Skin Corr. 1B	Skin corrosion, Category 1B
A.3/1	Eye Dam. 1	Serious eye damage, Category 1
A.4.2/1	Skin Sens. 1	Skin Sensitization, Category 1
A.4.2/1A	Skin Sens. 1A	Skin Sensitization, Category 1A
A.7/1B	Repr. 1B	Reproductive toxicity, Category 1B
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

Legend to abbreviations and acronyms used in the safety data sheet:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
IMDG: International Maritime Code for Dangerous Goods.
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO: International Civil Aviation Organization.
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
CLP: Classification, Labeling, Packaging.
EINECS: European Inventory of Existing Commercial Chemical Substances.
INCI: International Nomenclature of Cosmetic Ingredients.
CAS: Chemical Abstracts Service (division of the American Chemical Society).
GefStoffVO: Ordinance on Hazardous Substances, Germany.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
DNEL: Derived No Effect Level.
PNEC: Predicted No Effect Concentration.
TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
WGK: German Water Hazard Class.
KSt: Explosion coefficient.

Paragraphs modified from the previous revision:

- 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING
- 2. HAZARDS IDENTIFICATION
- 3. COMPOSITION/INFORMATION ON INGREDIENTS
- 5. FIRE-FIGHTING MEASURES
- 7. HANDLING AND STORAGE
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 9. PHYSICAL AND CHEMICAL PROPERTIES
- 11. TOXICOLOGICAL INFORMATION
- 12. ECOLOGICAL INFORMATION
- 14. TRANSPORT INFORMATION
- 16. OTHER INFORMATION