

Safety Data Sheet

ULTRABOND ECO 995

Safety Data Sheet dated: 06/14/2024 - version 5

Date of first edition: 03/27/2017



1. Identification

Product identifier

Mixture identification:

Trade name: ULTRABOND ECO 995

Trade code: 9019458

Recommended use and restrictions on use

Recommended use: Adhesive

Restrictions on use: Not available

Supplier's details

Company: MAPEI INC. (Canada)

2900 Francis-Hughes Avenue

H7L 3J5 - Laval - QC - CAN

Phone: 1-450-662-1212

Responsible: RDProductSafety@mapei.com

Emergency phone number

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

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

2. Hazard identification



Classification of the product

Eye irritation, Category 2A

Causes serious eye irritation.

Respiratory Sensitization, Category 1

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin Sensitization, Category 1

May cause an allergic skin reaction.

Label elements

Hazard pictograms and Signal Word



Danger

Hazard statements

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements

P201 Obtain special instructions before use.

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

P261 Avoid breathing mist/vapours/spray.

P264 Wash skin thoroughly after handling.

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

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

P284 [In case of inadequate ventilation] wear respiratory protection.

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

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.

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

P337+P313 If eye irritation persists: Get medical advice/attention.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER.
P362+P364 Take off contaminated clothing and wash it before reuse.
P501 Dispose of contents/container in accordance with applicable regulations.

Other hazards

None

Ingredient(s) with unknown acute toxicity

None

This product contains crystalline silica (quartz sand). IARC has classified crystalline silica as a Group 1 carcinogen. Both IARC and NTP consider silica as a known human carcinogen. Evidence is based on the chronic and long-term exposure workers have had to respirable sized crystalline silica dust particles. Because this product is in liquid or paste form, it does not pose a dust hazard; therefore, this classification is not relevant. (Note: sanding of the hardened product may create a silica dust hazard)

3. Composition/information on ingredients

Substances

Not Relevant

Mixtures

Hazardous components within the meaning of WHMIS 2015 and related classification:

List of components

Qty	Name	Ident. Numb.	Classification	Registration Number
2.5-5 %	calcium oxide; quicklime	CAS:1305-78-8 EC:215-138-9	Skin Irrit. 2, H315; STOT SE 3, H335; Eye Dam. 1, H318	
0.49-1 %	diphenylmethane-4,4'-diisocyanate	CAS:101-68-8 EC:202-966-0 Index:615-005-00-9	Acute Tox. 4, H332; Eye Irrit. 2A, H319; STOT SE 3, H335; Skin Irrit. 2, H315; Resp. Sens. 1, H334; Skin Sens. 1, H317; STOT RE 2, H373; Carc. 2, H351	01-2119457014-47-XXXX
0.25-0.49 %	silica sand	CAS:14808-60-7 EC:238-878-4	STOT RE 1, H372; Carc. 1A, H350	
0.1-0.25 %	4-isocyanatesulphonyltoluene; tosyl isocyanate	CAS:4083-64-1 EC:223-810-8 Index:615-012-00-7	Eye Irrit. 2A, H319; STOT SE 3, H335; Skin Irrit. 2, H315; Resp. Sens. 1, H334	01-2119980050-47-XXXX

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

4. First-aid measures

Description of necessary first-aid measures

In case of skin contact:

Immediately take off all contaminated clothing.
Remove contaminated clothing immediately and dispose of safely.
After contact with skin, wash immediately with soap and plenty of water.
If skin irritation or rash occurs: Get medical advice/attention.

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.
Remove contact lenses, if present and easy to do. Continue rinsing.

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.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Most important symptoms/effects, acute and delayed

Eye irritation

Eye damages

Indication of immediate medical attention and special treatment needed, if necessary

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

Suitable and unsuitable extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Unsuitable extinguishing media:

None in particular.

Specific hazards arising from the hazardous product

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.

Wash skin thoroughly after handling.

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

Community Occupational Exposure Limits (OEL)

	OEL Type	Country	Occupational Exposure Limit
calcium oxide; quicklime CAS: 1305-78-8	OSHA		Long Term: 5 mg/m ³
	ACGIH		Long Term: 2 mg/m ³ upper respiratory tract irritation;
	MAK	GERMANY	Long Term: 1 mg/m ³
	ACGIH		Long Term: 2 mg/m ³ upper respiratory tract irritation

diphenylmethane-4,4'-diisocyanate CAS: 101-68-8	MAK	AUSTRIA	Long Term: 1 mg/m3; Short Term: 4 mg/m3
	MAK	SWITZERLAND	Long Term: 2 mg/m3
	MAK	SWITZERLAND	Long Term: 1 mg/m3
	ACGIH		Long Term: 0.005 ppm Resp sens
	MAK	GERMANY	Long Term: 0.05 mg/m3
	ACGIH		Long Term: 0.005 ppm respiratory sensitization (listed under Methylene bisphenyl isocyanate (MDI))
	OSHA		Short Term: Ceiling - 0.2 mg/m3 - 0.02 ppm
	MAK	AUSTRIA	Long Term: 0.05 mg/m3 - 0.005 ppm; Short Term: 0.1 mg/m3 - 0.01 ppm
	ACGIH		Long Term: 0.005 ppm respiratory sensitization (listed under Methylene bisphenyl isocyanate (MDI))
	OSHA		Short Term: Ceiling - 0.2 mg/m3 - 0.02 ppm
silica sand 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	SWITZERLAND	Long Term: 0.15 mg/m3
	EU		Long Term: 0.1 mg/m3 Behaviour Binding

Predicted No Effect Concentration (PNEC) values

diphenylmethane-4,4'-diisocyanate CAS: 101-68-8	Exposure Route: Fresh Water; PNEC Limit: 1 mg/l
	Exposure Route: Marine water; PNEC Limit: 0.1 mg/l
	Exposure Route: Soil; PNEC Limit: 1 mg/kg
	Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 1 mg/l
	Exposure Route: Intermittent release; PNEC Limit: 10 mg/l

Derived No Effect Level (DNEL) values

diphenylmethane-4,4'-diisocyanate CAS: 101-68-8	Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects Worker Industry: 50 mg/kg
	Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects Worker Industry: 0.1 mg/m3
	Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects Worker Industry: 0.1 mg/m3
	Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects Worker Industry: 0.05 mg/m3
	Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects Worker Industry: 0.05 mg/m3
	Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects Consumer: 25 mg/kg
	Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects Consumer: 0.05 mg/m3
	Exposure Route: Human Oral; Exposure Frequency: Short Term, systemic effects Consumer: 20 mg/kg
	Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects Consumer: 0.05 mg/m3
	Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects Consumer: 0.025 mg/m3

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Consumer: 0.025 mg/m³

Exposure Route: Human Dermal; Exposure Frequency: Short Term, local effects
Worker Industry: 28.7 mg/cm²; Consumer: 17.2 mg/cm²

Appropriate engineering controls

Not available

Individual protection measures, such as personal protective equipment (PPE)

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: paste Beige

Odour: Characteristic

Odour threshold: Not Relevant

pH: Not Relevant

Melting point / freezing point: Not Relevant

Initial boiling point and boiling range: Not Relevant

Flash point: 100 °C (212 °F)

Evaporation rate: Not Relevant

Upper/lower flammability or explosive limits: Not Relevant

Vapour density: Not Relevant

Vapour pressure: Not Relevant

Relative density: 1.68 g/cm³

Solubility in water: Insoluble

Solubility in oil: partly soluble

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

Auto-ignition temperature: Not Relevant

Decomposition temperature: Not Relevant

Viscosity: 90,000.00 mPA-s

Kinematic viscosity: $> 20,5 \text{ mm}^2/\text{sec}$ (40 °C) mm^2/s

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

Likely routes of exposure:

Skin contact, skin absorption, eye contact, inhalation and ingestion.

Toxicological Information of the Preparation

a) acute toxicity	Not classified Based on available data, the classification criteria are not met
b) skin corrosion/irritation	Not classified Based on available data, the classification criteria are not met
c) serious eye damage/irritation	The product is classified: Eye irritation, Category 2A(H319)
d) respiratory or skin sensitisation	The product is classified: Respiratory Sensitization, Category 1(H334), 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	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:

calcium oxide; quicklime	a) acute toxicity	LD50 Oral Rat = 500 mg/kg LC50 Inhalation Rat > 6.04 mg/l 4h	
diphenylmethane-4,4'-diisocyanate	a) acute toxicity	LD50 Oral Rat > 2000 mg/kg	
		LD50 Skin Rabbit > 9400 mg/kg	
	b) skin corrosion/irritation	Skin Irritant Skin Rabbit Positive	
	d) respiratory or skin sensitisation	Skin Sensitization Skin Mouse Positive	
		Respiratory Sensitization Inhalation Positive	
	f) carcinogenicity	Carcinogenicity Inhalation Rat = 6 mg/m3	2 y
	g) reproductive toxicity	NOAEL Inhalation Rat = 12 mg/m3	20 d
silica sand	a) acute toxicity	LD50 Oral > 2000 mg/kg LD50 Skin > 2000 mg/kg	
4-isocyanatesulphonyltoluene; tosyl isocyanate	a) acute toxicity	LC50 Inhalation Rat > 640 ppm 1h	
		LD50 Oral Rat = 2234 mg/kg	

Substance(s) listed on the IARC Monographs:

diphenylmethane-4,4'-diisocyanate Group 3

silica sand

Group 1

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

silica sand

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

silica sand

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

silica sand

12. Ecological information

Ecotoxicity

Adopt good working practices, so that the product is not released into the environment.

List of Eco-Toxicological properties of the product

Not classified for environmental hazards.

Based on available data, the classification criteria are not met

List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
calcium oxide; quicklime	CAS: 1305-78-8 - EINECS: 215-138-9	a) Aquatic acute toxicity : LC50 Fish Cyprinus carpio = 1070 mg/L 96h IUCLID
diphenylmethane-4,4'-diisocyanate	CAS: 101-68-8 - EINECS: 202-966-0 - INDEX: 615-005-00-9	a) Aquatic acute toxicity : LC50 Fish > 1000 mg/L 96 b) Aquatic chronic toxicity : NOEC Daphnia > 10 mg/L - 21 d a) Aquatic acute toxicity : EC50 Algae > 1640 mg/L 72 c) Bacteria toxicity : EC50 > 100 mg/L 3 d) Terrestrial toxicity : NOEC > 1000 mg/kg - 14 d e) Plant toxicity : NOEC > 1000 mg/kg - 14 d

Persistence and degradability

N.A.

Bioaccumulative potential

N.A.

Mobility in soil

N.A.

Other adverse effects

N.A.

13. Disposal considerations

Safe handling and methods for disposal

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

Not classified as dangerous in the meaning of transport regulations.

UN number

TDG-UN number: Not Applicable

ADR-UN number: Not Applicable

DOT-UN Number: Not Applicable

IATA-Un number: Not Applicable

IMDG-Un number: Not Applicable

UN proper shipping name

TDG-Shipping Name: Not Applicable

ADR-Shipping Name: Not Applicable

DOT-Proper Shipping Name: Not Applicable

IATA-Technical name: Not Applicable

IMDG-Technical name: Not Applicable

Transport hazard class(es)

TDG-Class: Not Applicable

ADR-Class: Not Applicable

DOT-Hazard Class: Not Applicable

IATA-Class: Not Applicable

IMDG-Class: Not Applicable

Packing group

TDG-Packing Group: Not Applicable

ADR-Packing Group: Not Applicable

DOT Packing Group: Not Applicable

IATA-Packing group: Not Applicable

IMDG-Packing group: Not Applicable

Environmental hazards

Marine pollutant: No

Environmental Pollutant: Not Applicable

DOT-RQ: Yes DOT-RQ - Quantity: 5000 lbs

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)

Not Applicable

Special precautions in connection with transport or conveyance

TDG:

Not Applicable

Department of Transportation (DOT):

Not Applicable

Road and Rail (ADR-RID):

Not Applicable

Air (IATA):

Not Applicable

Sea (IMDG):

Not Applicable

15. Regulatory information

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

USA - Federal regulations

TSCA - Toxic Substances Control Act

All the components are listed on the TSCA inventory

TSCA listed substances:

calcium oxide; quicklime is listed in TSCA Section 8b
diphenylmethane-4,4'-diisocyanate is listed in TSCA Section 8b Section 8a - PAIR Section 5
silica sand is listed in TSCA Section 8b
4-isocyanatesulphonyltoluene; is listed in TSCA Section 8b
tosyl isocyanate

SARA - Superfund Amendments and Reauthorization Act

Section 302 - Extremely Hazardous Substances:

No substances listed

Section 304 - Hazardous substances:

diphenylmethane-4,4'-diisocyanate

Section 313 - Toxic chemical list:

diphenylmethane-4,4'-diisocyanate

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

Substance(s) listed under CERCLA:

diphenylmethane-4,4'-diisocyanate Reportable quantity: 5000 pounds

CAA - Clean Air Act

CAA listed substances:

diphenylmethane-4,4'-diisocyanate is listed in CAA Section 112(b) - HAP 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:

silica sand Listed as carcinogen

Massachusetts Right to know

Substance(s) listed under Massachusetts Right to know:

calcium oxide; quicklime

diphenylmethane-4,4'-diisocyanate

silica sand

Pennsylvania Right to know

Substance(s) listed under Pennsylvania Right to know:

calcium oxide; quicklime

diphenylmethane-4,4'-diisocyanate

silica sand

New Jersey Right to know

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

calcium oxide; quicklime

diphenylmethane-4,4'-diisocyanate

silica sand

16. Other information

Safety Data Sheet dated: 6/14/2024 - version 5

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
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H350	May cause cancer.
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure if inhaled.

Code	Hazard class and hazard category	Description
A.1/4/Inhal	Acute Tox. 4	Acute toxicity (inhalation), Category 4
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.4.1/1	Resp. Sens. 1	Respiratory Sensitization, Category 1
A.4.2/1	Skin Sens. 1	Skin Sensitization, Category 1
A.6/1A	Carc. 1A	Carcinogenicity, Category 1A
A.6/2	Carc. 2	Carcinogenicity, Category 2
A.8/3	STOT SE 3	Specific target organ toxicity following single exposure, Category 3
A.9/1	STOT RE 1	Specific target organ toxicity following repeated exposure, Category 1
A.9/2	STOT RE 2	Specific target organ toxicity following repeated exposure, 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
- 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

