

Safety Data Sheet

PRIMER SN /B

Safety Data Sheet dated: 06/02/2020 - version 2



SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Mixture identification:

Trade name: PRIMER SN /B

Trade code: 900216

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use: Hardener for epoxy products

Uses advised against: Data not available

1.3. Details of the supplier of the safety data sheet

Company: MAPEI S.p.A. - Via Cafiero, 22 - 20158 Milano

Tel: +39-02-376731

Fax: +39-02-37673.214

Responsable: sicurezza@mapei.it

1.4. Emergency telephone number

Poison Centre - Ospedale di Niguarda - Milan - Tel. +39/02/66101029

MAPEI S.p.A. - Tel. +(39)02376731 - (office hours)

SECTION 2: Hazards identification



2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

Acute Tox. 4	Harmful if swallowed.
Skin Corr. 1B	Causes severe skin burns and eye damage.
Skin Sens. 1B	May cause an allergic skin reaction.
STOT RE 2	May cause damage to organs through prolonged or repeated exposure.
Aquatic Chronic 3	Harmful to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Regulation (EC) n. 1272/2008 (CLP)

Pictograms and Signal Words



Danger

Hazard statements:

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements:

P261	Avoid breathing mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Contains:

benzyl alcohol

formaldehyde, polymer with benzenamine,
hydrogenated

2,4,6-tris(dimethylaminomethyl)phenol

4,4'-methylenebis(cyclohexylamine)

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

No PBT/vPvB Ingredients are present

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients**3.1. Substances**

N.A.

3.2. Mixtures

Mixture identification: PRIMER SN /B

Hazardous components within the meaning of the CLP regulation and related classification:

Quantity	Name	Ident. Numb.	Classification	Registration Number
≥25 - <50 %	benzyl alcohol	CAS:100-51-6 EC:202-859-9 Index:603-057-00-5	Acute Tox. 4, H332; Acute Tox. 4, H302; Eye Irrit. 2, H319	01-2119492630-38-XXXX
≥25 - <50 %	formaldehyde, polymer with benzenamine, hydrogenated	CAS:135108-88-2 EC:603-894-6	Acute Tox. 4, H302; Skin Corr. 1C, H314; Skin Sens. 1, H317; STOT RE 2, H373; Aquatic Chronic 3, H412	01-2119983522-33-XXXX
≥5 - <10 %	2,4,6-tris(dimethylaminomethyl)phenol	CAS:90-72-2 EC:202-013-9	Skin Corr. 1C, H314; Eye Dam. 1, H318; Skin Sens. 1B, H317	01-2119560597-27-XXXX
≥5 - <10 %	4,4'-methylenebis(cyclohexylamine)	CAS:1761-71-3 EC:217-168-8	Acute Tox. 4, H302; Skin Corr. 1B, H314; Skin Sens. 1, H317; STOT RE 2, H373	01-2119541673-38-xxxx

SECTION 4: First aid measures**4.1. Description of first aid measures**

In case of skin contact:

Immediately take off all contaminated clothing.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

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.

4.2. Most important symptoms and effects, both acute and delayed

Eye irritation

Eye damages

Skin Irritation

Erythema

4.3. 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)

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

5.3. Advice for firefighters

Use suitable breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Limit leakages with earth or sand.

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Retain contaminated washing water and dispose it.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

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.

7.2. 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.

7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

List of components with OEL value

Component	OEL Type	Country	Ceiling	Long Term mg/m ³	Long Term ppm	Short Term mg/m ³	Short Term ppm	Behaviour	Note
benzyl alcohol	National	FINLAND		45	10				
	National	POLAND		240					
	DFG	GERMANY	C			44	10		
	National	GERMANY		22	5				
	NDS	POLAND		240					
	National	CZECH REPUBLIC		40					
	National	LATVIA		5					

National	CZECH REPUBLIC	C	80
National	BULGARIA		5,0
National	LITHUANIA		5

Predicted No Effect Concentration (PNEC) values

Component	CAS-No.	PNEC Limit	Exposure Route	Exposure Frequency	Remark
benzyl alcohol	100-51-6	1 mg/l	Fresh Water		
		0,1 mg/l	Marine water		
		5,27 mg/kg	Freshwater sediments		
		0,527 mg/kg	Marine water sediments		
		39 mg/l	Microorganisms in sewage treatments		
		0,45 mg/kg	Soil		
		2,3 mg/l	Intermittent release		
2,4,6-tris (dimethylaminomethyl) phenol	90-72-2	0,084 mg/l	Fresh Water		
		0,0084 mg/l	Marine water		
		0,2 mg/l	Microorganisms in sewage treatments		
4,4'-methylenebis (cyclohexylamine)	1761-71-3	0,08 mg/l	Intermittent release		

Derived No Effect Level. (DNEL)

Component	CAS-No.	Worker Industrial	Worker Professional	Consumer	Exposure Route	Exposure Frequency	Remark
benzyl alcohol	100-51-6			20 mg/kg	Human Oral	Short Term, systemic effects	
				4 mg/kg	Human Oral	Long Term, systemic effects	
		110 mg/m3		27 mg/m3	Human Inhalation	Short Term, systemic effects	
		22 mg/m3		5,4 mg/m3	Human Inhalation	Long Term, systemic effects	
		40 mg/kg		20 mg/kg	Human Dermal	Short Term, systemic effects	
		8 mg/kg		4 mg/kg	Human Dermal	Long Term, systemic effects	
2,4,6-tris (dimethylaminomethyl)phenol	90-72-2	4,9 mg/m3			Human Inhalation	Long Term, local effects	
		0,31 mg/m3			Human Inhalation	Long Term, systemic effects	
4,4'-methylenebis (cyclohexylamine)	1761-71-3	0,5 mg/m3			Human Inhalation	Long Term, systemic effects	

8.2. Exposure controls

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; EN 374:

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 $\geq 480\text{min}$.

Neoprene gloves are suggested (0,5 mm) not recommended gloves: not waterproof gloves

Respiratory protection:

Personal Protective Equipment should comply with relevant CE standards (as EN 374 for gloves and EN 166 for goggles), correctly maintained and stored. Consult the supplier to check the suitability of equipment against specific chemicals and for user information.

Hygienic and Technical measures

N.A.

Appropriate engineering controls:

N.A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State Liquid

Appearance and colour: Liquid Amber

Odour: ammonia

Odour threshold: N.A.

pH: 11.00

Melting point / freezing point: 0 °C (32 °F)

Initial boiling point and boiling range: 200 °C (392 °F)

Flash point: 100 °C (212 °F)

Evaporation rate: N.A.

Upper/lower flammability or explosive limits: N.A.

Vapour density: N.A.

Vapour pressure: N.A.

Relative density: 1.02 g/cm³

Solubility in water: partly soluble

Partition coefficient (n-octanol/water): N.A. - This product is a mixture

Auto-ignition temperature: N.A. - No explosive or spontaneous ignition in contact with air at room temperature

Decomposition temperature: N.A.

Viscosity: 220.00 cPs

Explosive properties: N.A. - No components with explosive properties

Oxidizing properties: N.A. - No component with oxidizing properties

Solid/gas flammability: N.A.

9.2. Other information

No additional information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological information of the mixture:

There is no toxicological data available on the mixture. Consider the individual concentration of each component to assess toxicological effects resulting from exposure to the mixture.

Toxicological information on main components of the mixture:

benzyl alcohol	a) acute toxicity	LD50 Skin Rabbit = 2000 mg/kg
		LD50 Oral Rat = 1620 mg/kg
		LC50 Inhalation Rat = 11,00000 mg/l 4h
	g) reproductive toxicity	LD50 Skin Rabbit = 2 g/kg
		LC50 Inhalation Rat = 8,8 mg/l 4h
		LD50 Oral Rat = 1230 mg/kg
formaldehyde, polymer with benzenamine, hydrogenated	a) acute toxicity	NOAEL Rat = 1072 mg/m3
		LD50 Skin Rabbit > 2000 mg/kg
2,4,6-tris (dimethylaminomethyl) phenol	a) acute toxicity	LD50 Oral Rat = 367 mg/kg
		LD50 Oral Rat = 2169 mg/kg
		LD50 Skin Rat = 1280 mg/kg
		LD50 Oral Rat = 1200 mg/kg
4,4'-methylenebis (cyclohexylamine)	a) acute toxicity	LD50 Oral Rat = 625 mg/kg
		LD50 Skin Rabbit = 2110 mg/kg
		LC50 Inhalation Mouse = 0,4 mg/l 4h
		LD50 Oral Rat = 1000 mg/kg

If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.

- a) acute toxicity
- b) skin corrosion/irritation
- c) serious eye damage/irritation
- d) respiratory or skin sensitisation
- e) germ cell mutagenicity
- f) carcinogenicity
- g) reproductive toxicity
- h) STOT-single exposure
- Toxicological kinetics, metabolism and distribution information
- i) STOT-repeated exposure
- j) aspiration hazard

SECTION 12: Ecological information

12.1. Toxicity

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

Eco-Toxicological Information:

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

List of components with eco-toxicological properties

Component	Ident. Numb.	Ecotox Infos
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benzyl alcohol

CAS: 100-51-6 - EINECS: a) Aquatic acute toxicity : EC50 Daphnia = 230 mg/L 48
202-859-9 - INDEX: 603-
057-00-5

- a) Aquatic acute toxicity : LC50 Fish = 770 mg/L 1
- a) Aquatic acute toxicity : EC50 Algae = 770 mg/L 72
- a) Aquatic acute toxicity : LC50 Fish = 460 mg/L 96
- a) Aquatic acute toxicity : EC50 Daphnia = 66 mg/L
- b) Aquatic chronic toxicity : NOEC Daphnia = 51 mg/L - 21 d
- a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 460 mg/L 96h EPA
- a) Aquatic acute toxicity : LC50 Fish Lepomis macrochirus = 10 mg/L 96h EPA
- a) Aquatic acute toxicity : EC50 Daphnia water flea = 23 mg/L 48h
- a) Aquatic acute toxicity : LC50 Fish = 460 mg/L 96

formaldehyde, polymer with
benzenamine, hydrogenated

CAS: 135108-88-2 -
EINECS: 603-894-6

- a) Aquatic acute toxicity : EC50 Daphnia = 15,4 mg/L 48
- a) Aquatic acute toxicity : EC50 Algae = 43,9 mg/L 72
- c) Bacteria toxicity : EC50 Bacteria = 187 mg/L 3
- a) Aquatic acute toxicity : LC50 Fish = 63 mg/L 96
- a) Aquatic acute toxicity : LC50 Fish = 222 mg/L 24

2,4,6-
tris(dimethylaminomethyl)phenol

CAS: 90-72-2 - EINECS:
202-013-9

- a) Aquatic acute toxicity : LC50 Fish = 249 mg/L 24
- a) Aquatic acute toxicity : LC50 Fish = 175 mg/L 96
- a) Aquatic acute toxicity : EC50 Daphnia = 718 mg/L 96
- a) Aquatic acute toxicity : EC50 Algae = 84 mg/L 72
- b) Aquatic chronic toxicity : NOEC Algae = 6,25 mg/L
- a) Aquatic acute toxicity : EC50 Daphnia = 6,84 mg/L 48

4,4'-
methylenabis(cyclohexylamine)

CAS: 1761-71-3 -
EINECS: 217-168-8

- a) Aquatic acute toxicity : LC50 Fish > 100 mg/L 96
- a) Aquatic acute toxicity : EC50 Algae = mg/L 72
- b) Aquatic chronic toxicity : NOEC Daphnia = 4 mg/L 504

12.2. Persistence and degradability

N.A.

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT/vPvB Ingredients are present

12.6. Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

A waste code according to European waste catalogue (EWC) cannot be specified, due to dependence on the usage. Contact an authorized waste disposal service.

Product:

Do not dispose of waste into sewers.

Do not contaminate ponds, waterways or ditches with chemical or used container.

Send to an authorized waste disposal service.

Contaminated packaging:

Empty remaining content.

Dispose of as unused product.

Do not re-use empty containers.

SECTION 14: Transport information

14.1. UN number

2735

14.2. UN proper shipping name

ADR-Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Cycloaliphatic amine)

IATA-Technical name: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Cycloaliphatic amine)

IMDG-Technical name: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Cycloaliphatic amine)

14.3. Transport hazard class(es)

ADR-Class: 8, II

IATA-Class: 8, II

IMDG-Class: 8, II

14.4. Packing group

ADR-Packing Group: II

IATA-Packing group: II

IMDG-Packing group: II

14.5. Environmental hazards

Marine pollutant: No

Environmental Pollutant: No

14.6. Special precautions for user

Road and Rail (ADR-RID) :

ADR-Label: 8

ADR-Hazard identification number: NA

ADR-Special Provisions: 274

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 A

IMDG-Stowage Note: SG35

IMDG-Subsidiary hazards: -

IMDG-Special Provisioning: 274

IMDG-EMS: F-A, S-B

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

N.A.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

VOC (2004/42/EC) : 60 (A+B) g/l

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EU) 2015/830

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Regulation (EU) n. 2016/918 (ATP 8 CLP)

Regulation (EU) n. 2016/1179 (ATP 9 CLP)

N.A.

German Water Hazard Class.

N.A.

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: 3

Restrictions related to the substances contained: None

SVHC Substances:

No data available

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Code	Description
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure if inhaled.
H412	Harmful to aquatic life with long lasting effects.

Code	Hazard class and hazard category	Description
3.1/4/Inhal	Acute Tox. 4	Acute toxicity (inhalation), Category 4
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.2/1B	Skin Corr. 1B	Skin corrosion, Category 1B
3.2/1C	Skin Corr. 1C	Skin corrosion, Category 1C
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.4.2/1B	Skin Sens. 1B	Skin Sensitisation, Category 1B
3.9/2	STOT RE 2	Specific target organ toxicity — repeated exposure, Category 2
4.1/C3	Aquatic Chronic 3	Chronic (long term) aquatic hazard, category 3

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
3.1/4/Oral	Calculation method
3.2/1B	Calculation method
3.4.2/1B	Calculation method
3.9/2	Calculation method
4.1/C3	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

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.

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

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
 AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 ATE: Acute Toxicity Estimate
 ATEmix: Acute toxicity Estimate (Mixtures)
 BCF: Biological Concentration Factor
 BEI: Biological Exposure Index
 BOD: Biochemical Oxygen Demand
 CAS: Chemical Abstracts Service (division of the American Chemical Society).
 CAV: Poison Center
 CE: European Community
 CLP: Classification, Labeling, Packaging.
 CMR: Carcinogenic, Mutagenic and Reprotoxic
 COD: Chemical Oxygen Demand
 COV: Volatile Organic Compound
 CSA: Chemical Safety Assessment
 CSR: Chemical Safety Report
 DMEL: Derived Minimal Effect Level
 DNEL: Derived No Effect Level.
 DPD: Dangerous Preparations Directive
 DSD: Dangerous Substances Directive
 EC50: Half Maximal Effective Concentration
 ECHA: European Chemicals Agency
 EINECS: European Inventory of Existing Commercial Chemical Substances.
 ES: Exposure Scenario
 GefStoffVO: Ordinance on Hazardous Substances, Germany.
 GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
 IARC: International Agency for Research on Cancer
 IATA: International Air Transport Association.
 IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
 IC50: half maximal inhibitory concentration
 ICAO: International Civil Aviation Organization.
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
 IMDG: International Maritime Code for Dangerous Goods.
 INCI: International Nomenclature of Cosmetic Ingredients.
 IRCCS: Scientific Institute for Research, Hospitalization and Health Care
 KSt: Explosion coefficient.
 LC50: Lethal concentration, for 50 percent of test population.
 LD50: Lethal dose, for 50 percent of test population.
 LDLo: Leathal Dose Low
 N.A.: Not Applicable
 N/A: Not Applicable
 N/D: Not defined/ Not available
 NA: Not available
 NIOSH: National Institute for Occupational Safety and Health
 NOAEL: No Observed Adverse Effect Level
 OSHA: Occupational Safety and Health Administration.
 PBT: Persistent, Bioaccumulative and Toxic
 PGK: Packaging Instruction
 PNEC: Predicted No Effect Concentration.
 PSG: Passengers
 RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
 STEL: Short Term Exposure limit.
 STOT: Specific Target Organ Toxicity.
 TLV: Threshold Limiting Value.
 TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
 vPvB: Very Persistent, Very Bioaccumulative.
 WGK: German Water Hazard Class.

Paragraphs modified from the previous revision:

- 2. HAZARDS IDENTIFICATION
- 5. FIRE-FIGHTING MEASURES
- 9. PHYSICAL AND CHEMICAL PROPERTIES