

Safety Data Sheet

PRIMER MF/B

Safety Data Sheet dated: 07/10/2020 - version 6

Date of first edition: 03/05/2017



1. Identification

GHS Product identifier

Mixture identification:

Trade name: PRIMER MF/B

Trade code: 902415

Recommended use of the chemical and restrictions on use

Recommended use: Hardener for epoxy products

Uses advised against: no data available

Supplier's details

Company: MAPEI AUSTRALIA Pty Ltd

180 Viking Drive Wacol QLD 4076 Australia

Responsible: sales@mapei.com.au

Emergency phone number

Australian Poisons Information Centre 24 Hour Service 13 11 26

Police or Fire Brigade 000

2. Hazard identification



Classification of the Hazardous chemical

Skin Corr. 1A	Causes severe skin burns and eye damage.
Eye Dam. 1	Causes serious eye damage.
Skin Sens. 1B	May cause an allergic skin reaction.
Aquatic Chronic 3	Harmful to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

GHS label elements, including precautionary statements

Pictograms and Signal Words



Danger

Hazard statements:

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements:

P260	Do not breathe 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.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
P310	Immediately call a POISON CENTER or doctor/physician.
P321	Specific treatment (see supplementary instructions on this label).

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P405 Store locked up.
P501 Dispose of contents/container in accordance with applicable regulations.

Other hazards which do not result in a classification

Other Hazards: No other hazards

3. Composition/information on ingredients

Substances

no data available

Mixtures

Mixture identification: PRIMER MF/B

Hazardous components within the meaning of the "Australian Work Health and Safety (WHS)" regulation and related classification:

Concentration (% w/w)	Name	Ident. Numb.	Classification	Registration Number
≥25 - <50 %	Reaction products of 3-aminomethyl-3,5,5-trimethylcyclohexylamine and 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	CAS:38294-64-3 EC:500-101-4	Skin Corr. 1B, H314; Eye Dam. 1, H318; Skin Sens. 1, H317; Aquatic Chronic 3, H412	01-2119965165-33-000
≥20 - <25 %	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. 2A, H319	01-2119492630-38-XXXX
≥10 - <20 %	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 %	2-Methylpentane-1,5-diamine	CAS:15520-10-2 EC:239-556-6	Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Corr. 1A, H314; Eye Dam. 1, H318; STOT SE 3, H335	
≥2.5 - <5 %	3-aminomethyl-3,5,5-trimethylcyclohexylamine	CAS:2855-13-2 EC:220-666-8 Index:612-067-00-9	Skin Corr. 1B, H314; Eye Dam. 1, H318; Skin Sens. 1, H317; Aquatic Chronic 3, H412; Acute Tox. 4, H302; Acute Tox. 4, H312	01-2119514687-32-XXXX
≥1 - <2.5 %	bis[(dimethylamino)methyl]phenol	CAS:71074-89-0, 90-72-2 EC:275-162-0	Skin Corr. 1C, H314; Skin Sens. 1B, H317	
≥1 - <2.5 %	2-piperazin-1-ylethylamine	CAS:140-31-8 EC:205-411-0 Index:612-065-00-8	Acute Tox. 4, H312; Acute Tox. 4, H302; Skin Corr. 1B, H314; Skin Sens. 1, H317; Aquatic Chronic 3, H412	01-2119471486-30-0000
≥1 - <2.5 %	4-tert-butylphenol	CAS:98-54-4 EC:202-679-0	Repr. 2, H361; STOT SE 3, H335; Skin Irrit. 2, H315; Eye Dam. 1, H318; Aquatic Chronic 1, H410	01-2119489419-21

4. First-aid measures

Description of necessary 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:

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.

Symptoms caused by exposure

Eye irritation

Eye damages
Skin Irritation
Erythema

Medical attention and special treatment

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 extinguishing media

None in particular.

Water.

Carbon dioxide (CO₂).

Specific hazards arising from the chemical

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

Hazardous combustion products: no data available

Explosive properties: ==

Oxidizing properties: no data available

Special protective equipment and precautions for fire-fighters

Use suitable breathing apparatus.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

Environmental precautions

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

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

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

Methods and material for containment and cleaning up

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

Wash with plenty of water.

7. Handling and storage

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.

Conditions for safe storage, including any incompatibilities

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

8. Exposure controls/personal protection

Control parameters – exposure standards, biological monitoring

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				

	National GERMANY	22	5		
	National CZECH REPUBLIC	40			
	National LATVIA	5			
	National CZECH REPUBLIC	C		80	
	National BULGARIA	5.0			
	National LITHUANIA	5			
	National SLOVENIA	22	5	44	10
4-tert-butylphenol	National NORWAY	0.5	0.08	1.0	0.16
	National DENMARK	0.5	0.08		
	National GERMANY	0.5	0.08		
	National SLOVAKIA	0.08			
	National SLOVAKIA	0.5			
	National SLOVENIA	0.5	0.08	2	0.32
	National SLOVENIA	0.5	0.08	1.0	0.16

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		
2,4,6-tris (dimethylaminomethyl) phenol	90-72-2	2.3 mg/l	Intermittent release		
		0.084 mg/l	Fresh Water		
		0.0084 mg/l	Marine water		
		0.2 mg/l	Microorganisms in sewage treatments		
2-Methylpentane-1,5-diamine	15520-10-2	0.042 mg/l	Marine water		
		0.42 mg/l	Fresh Water		
		0.42 mg/l	Intermittent release		
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2	0.06 mg/l	Fresh Water		
		1.121 mg/kg	Soil		
		0.006 mg/l	Marine water		
		5.784 mg/kg	Freshwater sediments		
		0.578 mg/kg	Marine water sediments		
		0.23 mg/l	Intermittent release		
		3.18 mg/l	Microorganisms in sewage treatments		

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/m ³		27 mg/m ³	Human Inhalation		Short Term, systemic effects
			22 mg/m ³		5.4 mg/m ³	Human Inhalation		Long Term, systemic effects
			40 mg/kg		20 mg/kg	Human Dermal		Short Term, systemic effects
2,4,6-tris (dimethylaminomethyl) phenol	90-72-2			8 mg/kg	Human Dermal		Long Term, systemic effects	
			4.9 mg/m ³			Human Inhalation		Long Term, local effects
2-Methylpentane-1,5-diamine	15520-10-2			0.31 mg/m ³	Human Inhalation		Long Term, systemic effects	
				1.5 mg/kg	Human Dermal		Long Term (repeated)	
				0.25 mg/m ³	Human Inhalation		Long Term (repeated)	
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2			0.5 mg/m ³	Human Inhalation		Short Term (acute)	
					0.526 mg/kg	Human Oral		Long Term, systemic effects

Appropriate engineering controls

no data 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:

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

Respiratory protection:

Use adequate protective respiratory equipment.

Respiratory protection must be used where exposure levels exceed workplace exposure limits. Refer to AS/NZS 1715-1716 for information on selection and use of appropriate respiratory protection equipment.

9. Physical and chemical properties

Color: Yellow

Appearance: Liquid

Odour: Characteristic

Odour threshold: no data available

pH: 11.00

Melting point / freezing point: no data available

Initial boiling point and boiling range: no data available

Flash point: no data available

Evaporation rate: no data available

Flammability (Solid, Gas): no data available

Upper/lower flammability or explosive limits: no data available

Vapour pressure: no data available

Vapour density: no data available

Relative density: 1.00 g/cm³

Solubility in water: partly soluble

Solubility in oil: soluble
Partition coefficient (n-octanol/water): no data available
Auto-ignition temperature: no data available
Decomposition temperature: no data available
Viscosity: 50.00 cPs
Specific heat value: no data available
Saturated vapour concentration: no data available
Release of invisible flammable vapours and gases: no data available
Particle size: no data available
Particle size distribution: no data available
Shape and aspect ratio: no data available
Crystallinity: no data available
Dustiness: no data available
Specific surface area: no data available
Degree of aggregation or agglomeration, and dispersibility: no data available
Biodurability or biopersistence: no data available
Surface coating or chemistry: no data available
VOC (Volatile Organic Compound) : (A+B) 29.9 (Rule 1168) g/l

10. Stability and reactivity

Reactivity

Stable under normal conditions

Chemical stability

no data available

Possibility of hazardous reactions

None.

Conditions to avoid

Stable under normal conditions.

Incompatible materials

None in particular.

Hazardous decomposition products

SECTION 11: Toxicological information

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
		LD50 Skin Rabbit = 2 g/kg
		LC50 Inhalation Rat = 8.8 mg/l 4h
2,4,6-tris(dimethylaminomethyl)phenol	a) acute toxicity	LD50 Oral Rat = 2169 mg/kg
		LD50 Skin Rat = 1280 mg/kg
		LD50 Oral Rat = 1200 mg/kg
2-Methylpentane-1,5-diamine	a) acute toxicity	LC50 Inhalation Mist Rat = 4.9 mg/l 1h
		LD50 Oral Rat = 1170 mg/kg
		LD50 Skin Rat = 1870 mg/kg

LD50 Oral Rat = 1690 mg/kg
LC50 Inhalation Rat = 4.1 mg/l 1h
LC50 Inhalation Rat = 2.9 mg/l 1h

3-aminomethyl-3,5,5-trimethylcyclohexylamine a) acute toxicity

LD50 Oral Rat = 1030 mg/kg

LC50 Inhalation Rat = 5.01 mg/l 4h

LD50 Skin Rabbit > 2000 mg/kg

LD50 Oral Rat = 1030 mg/kg

LD50 Skin Rat > 2000 mg/kg

g) reproductive toxicity

NOAEL Oral Rat = 250 mg/kg

NOAEL Oral Rat = 50 mg/kg

2-piperazin-1-ylethylamine a) acute toxicity

LD50 Oral Rat = 2140 mg/kg

LD50 Skin Rabbit = 866 mg/kg

LD50 Skin Rabbit = 880 µL/kg

LD50 Oral Rat = 2140 µL/kg

4-tert-butylphenol a) acute toxicity

LD50 Oral Rat 2951 mg/kg

LD50 Skin Rabbit 2288 mg/kg

LD50 Skin Rabbit = 2318 mg/kg

LD50 Oral Rat = 4000 mg/kg

If not differently specified, the information required in the regulation and 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

12. Ecological information

Ecotoxicity

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

Eco-Toxicological Information:

Harmful to aquatic life with long lasting effects.

List of components with eco-toxicological properties

Component	Ident. Numb.	Ecotox Infos
benzyl alcohol	CAS: 100-51-6 - EINECS: 603-057- 00-5 - INDEX: 202- 859-9	a) Aquatic acute toxicity : EC50 Daphnia = 230 mg/L 48 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
2,4,6-tris(dimethylaminomethyl)phenol	CAS: 90-72-2 - INDEX: 202-013-9	a) Aquatic acute toxicity : EC50 Daphnia water flea = 23 mg/L 48h a) Aquatic acute toxicity : LC50 Fish = 222 mg/L 24
		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
2-Methylpentane-1,5-diamine	CAS: 15520-10-2 - INDEX: 239-556-6	a) Aquatic acute toxicity : EC50 Algae > 100 mg/L 72
		a) Aquatic acute toxicity : EC50 Fish = 1825 mg/L 96
		a) Aquatic acute toxicity : EC50 Daphnia = 19.8 mg/L 48
3-aminomethyl-3,5,5-trimethylcyclohexylamine	CAS: 2855-13-2 - EINECS: 612-067-00-9 - INDEX: 220-666-8	a) Aquatic acute toxicity : LC50 Fish = 110 mg/L 96
		a) Aquatic acute toxicity : EC50 Daphnia = 23 mg/L 48
		a) Aquatic acute toxicity : NOEC Daphnia = 8.3 mg/L 48
		b) Aquatic chronic toxicity : NOEC Daphnia = 3 mg/L - 21 d
		a) Aquatic acute toxicity : EC50 Algae > 50 mg/L 72
		a) Aquatic acute toxicity : NOEC Algae = 1.5 mg/L 72
		a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna 14.6 mg/L 48h EPA
		a) Aquatic acute toxicity : EC50 Algae Desmodesmus subspicatus = 37 mg/L 72h IUCLID
2-piperazin-1-ylethylamine	CAS: 140-31-8 - EINECS: 612-065-00-8 - INDEX: 205-411-0	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
4-tert-butylphenol	CAS: 98-54-4 - INDEX: 202-679-0	a) Aquatic acute toxicity : LC50 Fish Pimephales promelas 4.71 mg/L 96h EPA
		a) Aquatic acute toxicity : LC50 Fish Cyprinus carpio = 6.9 mg/L 96h EPA
		a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 3.9 mg/L 48h IUCLID
		a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna 3.4 mg/L 48h EPA
		a) Aquatic acute toxicity : EC50 Algae Desmodesmus subspicatus = 11.2 mg/L 72h IUCLID

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

Other adverse effects

no data available

13. Disposal considerations

Disposal 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

2735

UN proper shipping name

ADG-Shipping Name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (modified cycloaliphatic polyamines - isophoronediamine mixture)

ADR-Shipping Name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (modified cycloaliphatic polyamines - isophoronediamine mixture)

IATA-Technical name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (modified cycloaliphatic polyamines - isophoronediamine mixture)

IMDG-Technical name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (modified cycloaliphatic polyamines - isophoronediamine mixture)

Transport hazard class(es)

ADG-Class: 8

ADR-Class: 8

IATA-Class: 8

IMDG-Class: 8

Packing group, if applicable

ADG-Packing Group: II

ADR-Packing Group: II

IATA-Packing group: II

IMDG-Packing group: II

Environmental hazards

ADG-Environmental Pollutant: No

Marine pollutant: No

no data available

Special precautions for user

IATA-Subsidiary hazards:

IMDG-Subsidiary hazards:

no data available

Additional Information

no data available

HazChem Code/Emergency Action code

2X

15. Regulatory information

Safety, health and environmental regulations specific for the product in question

This Safety Data Sheet has been prepared according to the Australian Work Health and Safety (WHS) act and the Code of Practice on preparation of safety data sheets for Hazardous Chemicals.

AICS: all components are listed

16. Other information

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.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H361	Suspected of damaging fertility or the unborn child in contact with skin and if swallowed.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

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:

- Safety Data Sheet
- 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
- 16. OTHER INFORMATION