

Safety Data Sheet

MAPEPRIM SP comp.B

Safety Data Sheet dated: 14/03/2023 - version 6

Date of first edition: 03/05/2017



Section 1: Identification

GHS Product identifier

Mixture identification:

Trade name: MAPEPRIM SP comp.B

Trade code: 901551

Recommended use of the chemical and restrictions on use

Recommended use: Water-borne synthetic resin based primer

Uses advised against: no data available

Supplier's details

Company: MAPEI AUSTRALIA Pty Ltd

180 Viking Drive Wacol QLD 4076 Australia

T. +61 7 32765000 (Mon-Fri 8am to 4.30pm)

F. +61 7 32765076

Responsible: sales@mapei.com.au

Emergency phone number

Australian Poisons Information Centre 24 Hour Service 13 11 26

Police or Fire Brigade 000

Section 2: Hazard(s) identification



Classification of the Hazardous chemical

Skin Sensitisation, Category 1A

May cause an allergic skin reaction.

Short-term (acute) aquatic hazard - Category 3

Harmful to aquatic life

Long-term (chronic) aquatic hazard - Category 2

Toxic 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



Warning

Hazard statements

H317 May cause an allergic skin reaction.

H402 Harmful to aquatic life

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P261 Avoid breathing mist/vapours/spray.

P273 Avoid release to the environment.

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

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

P321 Specific treatment (see supplementary instructions on this label)

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

P362+P364 Take off contaminated clothing and wash it before reuse.

P391 Collect spillage.

P501 Dispose of contents/container in accordance with applicable regulations.

Other hazards which do not result in a classification

Other Hazards: No other hazards

Section 3: Composition and information on ingredients

Substances

no data available

Mixtures

Mixture identification: MAPEPRIM SP comp.B

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

Qty	Name	Ident. Numb.	Classification	Registration Number
≥2.5 - <5 %	Formaldehyde, polymer with N1-(2-aminoethyl)-N2-[2-[(2-aminoethyl)amino]ethyl]-1,2-ethanediamine, 2,2'-[1,4-butanediylbis (oxymethylene)]bis[oxirane], 4,4'-(1-methylethylidene) bis(4,1-phenyleneoxymethylene)bis [oxirane], reaction products with Bu glycidylether and 1-[[2-(2-aminoethyl) ethyl]amino]- 3-phenoxy-2-propanol, acetates (salts)	CAS:180583-06-6	Skin Sens. 1, H317; Aquatic Chronic 2, H411	
≥1 - <2.5 %	aliphatic polyamine		Aquatic Acute 1, H400; Aquatic Chronic 1, H410	
≥0.49 - <1 %	2-Propenenitrile, reaction products with 3-amino 1,5,5-trimethylcyclohexanemethanamine	CAS:90530-15-7 EC:292-053-3	Skin Corr. 1B, H314; Skin Sens. 1A, H317	01-2120094715-47-XXXX
≥0.25 - <0.49 %	Amines, polyethylenepoly-, tetraethylenepentamine fraction	CAS:90640-66-7 EC:292-587-7 Index:612-060-00-0	Acute Tox. 4, H312; Skin Corr. 1B, H314; Skin Sens. 1, H317; Eye Dam. 1, H318; Aquatic Chronic 2, H411	01-2119487290-37-XXXX
≥0.1 - <0.25 %	m-xylylenediamine	CAS:1477-55-0 EC:216-032-5	Acute Tox. 4, H332; Acute Tox. 4, H302; Aquatic Chronic 3, H412; Aquatic Acute 3, H402; Skin Corr. 1B, H314; Skin Sens. 1B, H317	01-2119480150-50-XXXX

Section 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.

In case of eyes contact:

Wash immediately with water.

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

no data available

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).

Section 5: Firefighting measures

Suitable extinguishing media

None in particular.

Water.

Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

None in particular.

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.

HazChem Code/Emergency Action code

•3Z

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

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.

Methods and material for containment and cleaning up

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

Wash with plenty of water.

Retain contaminated washing water and dispose it.

Section 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

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

Section 8: Exposure controls and personal protection

Control parameters – exposure standards, biological monitoring

Community Occupational Exposure Limits (OEL)

	OEL Type	Country	Occupational Exposure Limit
m-xylylenediamine CAS: 1477-55-0	ACGIH		Ceiling - Short Term: 0,1 mg/m ³ Skin - Eye, skin, and GI irr
		National FINLAND	Short Term: 0,1 mg/m ³ FINLAND, takvärde, hud
		National NORWAY	Ceiling - Short Term: 0,1 mg/m ³ T: Ceiling value is an instantaneous value that indicates the maximum concentration of a chemical in the breathing zone that should not be exceeded
		National AUSTRIA	Long Term: 0,1 mg/m ³ ; Short Term: 0,1 mg/m ³
		ACGIH	Ceiling - Short Term: 0,1 mg/m ³
		ACGIH	Skin - potential significant contribution to overall exposure by the cutaneous route;eye, gastrointestinal and skin irritation
		National FRANCE	Short Term: 0,1 mg/m ³
		National DENMARK	Ceiling - Short Term: 0,1 mg/m ³ - 0,02 ppm
		National FINLAND	Ceiling - Short Term: 0,1 mg/m ³
		AUS AUSTRALIA	Ceiling - Short Term: 0,1 mg/m ³
		National PORTUGAL	Ceiling - Short Term: 0,1 mg/m ³
		National SLOVENIA	Long Term: 0,1 mg/m ³

ACGIH	Ceiling - Short Term: 0,1 mg/m3
ACGIH	Skin - potential significant contribution to overall exposure by the cutaneous route;eye, gastrointestinal and skin irritation
National NORWAY	Ceiling - Short Term: 0,1 mg/m3
ACGIH	Ceiling - Short Term: 0,018 ppm

Predicted No Effect Concentration (PNEC) values

2-Propenenitrile, reaction products with 3-amino-1,5,5-trimethylcyclohexanemethanamine
CAS: 90530-15-7

Exposure Route: Fresh Water; PNEC Limit: 0,00992 mg/l
 Exposure Route: Marine water; PNEC Limit: 0,00099 mg/l
 Exposure Route: Intermittent release; PNEC Limit: 0,992 mg/l
 Exposure Route: Freshwater sediments; PNEC Limit: 96,97 mg/kg
 Exposure Route: Marine water sediments; PNEC Limit: 9,98 mg/kg
 Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 4,65 mg/l
 Exposure Route: Soil; PNEC Limit: 19,33 mg/kg
 Exposure Route: Fresh Water; PNEC Limit: 0,00068 mg/l

Amines, polyethylenepoly-, tetraethylenepentamine fraction
CAS: 90640-66-7

Exposure Route: Marine water; PNEC Limit: 0,00068 mg/l
 Exposure Route: Freshwater sediments; PNEC Limit: 3,34 mg/kg
 Exposure Route: Marine water sediments; PNEC Limit: 0,343 mg/kg
 Exposure Route: Soil; PNEC Limit: 0,683 mg/kg

m-xylenylenediamine
CAS: 1477-55-0

Exposure Route: Fresh Water; PNEC Limit: 0,094 mg/kg
 Exposure Route: Marine water; PNEC Limit: 0,0094 mg/l
 Exposure Route: Freshwater sediments; PNEC Limit: 0,43 mg/kg
 Exposure Route: Marine water sediments; PNEC Limit: 0,043 mg/kg
 Exposure Route: Intermittent release; PNEC Limit: 0,152 mg/l
 Exposure Route: Soil; PNEC Limit: 0,045 mg/kg
 Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 10 mg/l

Derived No Effect Level (DNEL) values

Amines, polyethylenepoly-, tetraethylenepentamine fraction
CAS: 90640-66-7

Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects
Consumer: 10 mg/kg

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 0,74 mg/kg; Consumer: 0,32 mg/kg

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

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 0,00129 mg/l; Consumer: 0,00038 mg/l

m-xylenylenediamine
CAS: 1477-55-0

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Industry: 0,33 mg/kg

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Industry: 1,2 mg/m3

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Industry: 0,2 mg/m3

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:

Suitable materials for safety gloves; AS/NZS 2161.10:

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 protective 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 AS/NZS 1715-1716 for information on selection and use of appropriate respiratory protection equipment.

no data available

Section 9: Physical and chemical properties

Physical state: Liquid

Appearance: liquid

Color: white

Odour: ammonia

pH: 10.00

Melting point / freezing point: no data available

Initial boiling point and boiling range: 100 °C (212 °F)

Flash point: no data available

Evaporation rate: no data available

Flammability (Solid, Gas) no data available

Lower and upper explosion limit/flammability limits: no data available

Vapour pressure: no data available

Vapour density: no data available

Relative density: 1.05 g/cm³

Solubility in water: dispersible

Solubility in oil: insoluble

Partition coefficient (n-octanol/water): no data available

Auto-ignition temperature: no data available

Decomposition temperature: no data available

Kinematic viscosity: no data available

VOC % (Volatile Organic Compound) : 12,6 (A+B) (Rule 1168) g/l

Particle characteristics:

Particle size: no data available

Particle size distribution: no data available

Shape and aspect ratio: no data available

Specific surface area: no data available

Section 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

None.

Section 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	Not classified Based on available data, the classification criteria are not met
c) serious eye damage/irritation	Not classified Based on available data, the classification criteria are not met
d) respiratory or skin sensitisation	The product is classified: Skin Sensitisation, 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	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:

aliphatic polyamine	a) acute toxicity	LD50 Oral Rat > 5000 mg/kg LD50 Skin Rabbit > 2000 mg/kg
2-Propenenitrile, reaction products with 3-amino 1,5,5-trimethylcyclohexanemet hanamine	a) acute toxicity	LD50 Oral Rat = 2600 mg/kg
Amines, polyethylenepoly-, tetraethylenepentamine fraction	a) acute toxicity	LD50 Oral Rat = 3250 mg/kg
	d) respiratory or skin sensitisation	LD50 Skin Rabbit > 1000 mg/kg Skin Sensitization Rabbit Positive
m-xyllylenediamine	a) acute toxicity	LD50 Oral Mouse = 930 mg/kg LD50 Skin Rabbit = 2000 mg/kg LC50 Inhalation Mist Rat = 1,34 mg/l 4h LC50 Inhalation Rat = 700, ppm 1h

Section 12: Ecological information

Ecotoxicity

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

Eco-Toxicological Information:

Toxic to aquatic life with long lasting effects.

Harmful to aquatic life

List of Eco-Toxicological properties of the product

The product is classified: Short-term (acute) aquatic hazard - Category 3(H402), Long-term (chronic) aquatic hazard - Category 2(H411)

List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
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2-Propenenitrile, reaction products with 3-amino 1,5,5-trimethylcyclohexanemethanamine CAS: 90530-15-7 - EINECS: 292-053-3

a) Aquatic acute toxicity : EC50 Algae = 9,92 mg/L 72

b) Aquatic chronic toxicity : NOEC Algae = 8,11 mg/L 72

a) Aquatic acute toxicity : EC50 Daphnia > 100 mg/L 48

b) Aquatic chronic toxicity : LC50 Daphnia Brachidanio rerio > 100 mg/L 96h

OECD Guideline 203 - Static test

b) Aquatic chronic toxicity : EC50 Algae Pseudokirchneriella subcapitata > 100 mg/L 72h OECD Guideline 201 - Static test

b) Aquatic chronic toxicity : EC50 Crustacea Daphnia magna > 100 mg/L 48h OECD Guideline 202 - Static test

Amines, polyethylenepoly-, tetraethylenepentamine fraction

CAS: 90640-66-7 - EINECS: 292-587-7 - INDEX: 612-060-00-0

a) Aquatic acute toxicity : LC50 Fish > 100 mg/L 96

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

a) Aquatic acute toxicity : EC50 Algae > 2,1 mg/L 72

a) Aquatic acute toxicity : NOEC Algae = 0,5 mg/L

m-xylylenediamine

CAS: 1477-55-0 - EINECS: 216-032-5

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

a) Aquatic acute toxicity : EC50 Daphnia = 15,2 mg/L 48h

a) Aquatic acute toxicity : LC50 Fish Oryzias latipes = 87,6 mg/L 96h ECHA

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

Other adverse effects

no data available

Section 13: Disposal considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Recover if possible.

no data available

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.

Section 14: Transport information

UN number

3082

UN proper shipping name

ADG-Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (aliphatic polyamine)

ADR-Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (aliphatic polyamine)
IATA-Technical name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (aliphatic polyamine)
IMDG-Technical name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (aliphatic polyamine)

Transport hazard class(es)

ADG-Class: 9
ADR-Class: 9
IATA-Class: 9
IMDG-Class: 9

Packing group, if applicable

ADG-Packing Group: III
ADR-Packing Group: III
IATA-Packing group: III
IMDG-Packing group: III

Environmental hazards

ADG-Environmental Pollutant: Yes
Marine pollutant: Yes

Special precautions for user

ADG-Subsidiary hazards -
ADG-S.P.: 274 331 335 375 AU01

Road and Rail (ADR-RID):

ADR-Label: 9
ADR-Hazard identification number: NA
ADR-Special Provisions: 274 335 375 601
ADR-Transport category (Tunnel restriction code): 3 (-)

Air (IATA):

IATA-Passenger Aircraft: 964
IATA-Cargo Aircraft: 964
IATA-Label: 9
IATA-Subsidiary hazards: -
IATA-Erg: 9L
IATA-Special Provisions: A97 A158 A197

Sea (IMDG):

IMDG-Stowage Code: Category A
IMDG-Stowage Note: -
IMDG-Subsidiary hazards: -
IMDG-Special Provisions: 274 335 969
IMDG-EMS: F-A, S-F

Additional Information

no data available

HazChem Code/Emergency Action code

no data available

These substances, when carried in single or combination packagings containing a net quantity per single or inner packaging of 5 l or less for liquids, or having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to provisions of ADR, IMDG and IATA DGR.

Section 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.
AICIS: all components are listed

Section 16: Any other relevant information

Code	Description
H302	Harmful if swallowed.
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.
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.
H402	Harmful 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
3.1/4/Dermal	Acute Tox. 4	Acute toxicity (dermal), Category 4
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
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.4.2/1A	Skin Sens. 1A	Skin Sensitisation, Category 1A
3.4.2/1B	Skin Sens. 1B	Skin Sensitisation, Category 1B
AUS-HAE/A1	Aquatic Acute 1	Short-term (acute) aquatic hazard - Category 1
AUS-HAE/A3	Aquatic Acute 3	Short-term (acute) aquatic hazard - Category 3
AUS-HAE/C1	Aquatic Chronic 1	Long-term (chronic) aquatic hazard - Category 1
AUS-HAE/C2	Aquatic Chronic 2	Long-term (chronic) aquatic hazard - Category 2
AUS-HAE/C3	Aquatic Chronic 3	Long-term (chronic) aquatic hazard - Category 3

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
KAFH: KAFH
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
- 3. COMPOSITION/INFORMATION ON INGREDIENTS
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 11. TOXICOLOGICAL INFORMATION
- 12. ECOLOGICAL INFORMATION
- 16. OTHER INFORMATION