Safety Data Sheet ULTRABOND P 902 2K parte B

Safety Data Sheet dated: 04/02/2020 - version 3



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

1.1. Product identifier

Mixture identification:

Trade name: ULTRABOND P 902 2K parte B

Trade code: 901328

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

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

Uses advised against: Data not available

1.3. Details of the supplier of the safety data sheet

Company: MAPEI U.K. Ltd - Mapei House Steel Park Road

Halesowen - West Midlands B62 8HD www.mapei.co.uk (office hour 8:30-17:30)

Responsable: sicurezza@mapei.it

1.4. Emergency telephone number call NHS 111 or a doctor/OHES Environmental Ltd +44(0)1684 299 886

phone: +44(0)121 508 6970 - fax: +44(0)121 5086 960

SECTION 2: Hazards identification









2.1. Classification of the substance or mixture

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

Skin Corr. 1C Causes severe skin burns and eye damage.

Eye Dam. 1 Causes serious 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 2 Toxic 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:

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.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:

P261 Avoid breathing dust or mist.
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.

P310 Immediately call a POISON CENTER.

P391 Collect spillage.

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Special Provisions:

EUH208 Contains bis[(dimethylamino)methyl]phenol. May produce an allergic reaction.

Contains:

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and tetraethylenepentamine

fatty acids, C18 unsatd., dimers,oligomeric reaction products with teta

2,4,6-tris(dimethylaminomethyl)phenol

2-piperazin-1-ylethylamine

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: ULTRABOND P 902 2K parte B

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

Quantity	Name	Ident. Numb.	Classification	Registration Number
≥20 - <25 %	Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and tetraethylenepentamine	CAS:103758-98-1 EC:500-289-8	Skin Irrit. 2, H315; Eye Dam. 1, H318; Skin Sens. 1,1A,1B, H317; Aquatic Chronic 2, H411	01-2119972321-42-0001
≥10 - <20 %	fatty acids, C18 unsatd., dimers,oligomeric reaction products with teta	CAS:68082-29-1 EC:500-191-5	Skin Irrit. 2, H315; Skin Sens. 1, H317; Eye Dam. 1, H318; Aquatic Chronic 2, H411	01-2119972320-44-xxxx
≥2.5 - <5 %	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
≥1 - <2.5 %	3-aminomethyl-3,5,5- trimethylcyclohexylamine	CAS:2855-13-2 EC:220-666-8 Index:612-067-00-9	Acute Tox. 4, H312; Acute Tox. 4, H302; Skin Corr. 1B, H314; Eye Dam. 1, H318; Skin Sens. 1, H317; Aquatic Chronic 3, H412	01-2119514687-32-xxxx
≥0.49 - <1 %	bis[(dimethylamino)methyl]phenol	CAS:71074-89-0 EC:275-162-0	Skin Corr. 1C, H314; Skin Sens. 1B, H317	

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 opthalmologist 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.

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

Eye irritation

Eye damages

Skin Irritation

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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

Predicted No Effect Concentration (PNEC) values

1

Component	CAS-No.		Exposure Route	Exposure Frequency	Remark
Fatty acids, C18-unsatd.,	103758-98-	0,00263	Fresh Water		

dimers, oligomeric reaction products with tall-oil fatty acids and tetraethylenepentamine

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mg/l

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		0, 000263 mg/l	Marine water
		236,01 mg/kg	
		26,301 mg/kg	Marine water sediments
fatty acids, C18 unsatd., dimers,oligomeric reaction products with teta	68082-29-1	0,00434 mg/l	Fresh Water
		0, 000434 mg/l	Marine water
		434,02 mg/kg	
		43,4 mg/kg	Marine water sediments
		86,78 mg/kg	Soil
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
3-aminomethyl-3,5,5- trimethylcyclohexylamine	2855-13-2	0,06 mg/l	Fresh Water
		0,006 mg/l	Marine water
		0,23 mg/l	Intermittent release
		5,784 mg/kg	Freshwater sediments
		0,578 mg/kg	Marine water sediments
		1,121 mg/kg	Soil
		3,18 mg/l	Microorganisms in sewage treatments

Derived No Effect Level. (DNEL)

Component	CAS-No.		Worker Profess ional		Exposure Route	Exposure Frequency Remark
Fatty acids, C18- unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and tetraethylenepentan ine		- 1,1 mg/kg		0,56 mg/kg	Human Dermal	Long Term (repeated)
				0,56 mg/kg	Human Ora	l Long Term (repeated)
		3,9 mg/m3		0,97 mg/m3	Human Inhalation	Long Term (repeated)

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fatty acids, C18 68082-29-1 0,00039 0,00039 0, Human Long Term (repeated) mg/cm2 mg/cm2 000097 Inhalation

mg/cm2

unsatd., dimers,oligomeric

reaction products with teta

> 0,00011 0,56 1.1 Human Long Term (repeated)

mg/cm2 mg/kg Dermal mg/kg

4.9 2,4,6-90-72-2 Human Long Term, local

mg/m3 Inhalation effects tris

(dimethylaminometh

yl)phenol

0,31 Human Long Term, systemic

Inhalation effects mg/m3

3-aminomethyl-2855-13-2 20,1 Human 3,5,5-Inhalation mg/m3

trimethylcyclohexyla

mine

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 >=0,5mm; breakthrough time >=480min. Nitrile rubber - NBR: thickness >=0,35mm; breakthrough time >=480min. Butyl rubber - IIR: thickness >=0,5mm; breakthrough time >=480min.

Fluorinated rubber - FKM: thickness >=0,4mm; breakthrough time >=480min.

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: paste Beige

Odour: ammonia Odour threshold: N.A.

pH: 11.00

Melting point / freezing point: N.A. Initial boiling point and boiling range: N.A.

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: N.A.

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: 22,500.00 cPs

Explosive properties: == - No components with explosive properties Oxidizing properties: N.A. - No component with oxidizing properties

Solid/gas flammability: N.A.

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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:

a) acute toxicity

Fatty acids, C18-unsatd., a) acute toxicity dimers, oligomeric reaction products with tall-oil fatty acids and tetraethylenepentamine

LD50 Oral Rat > 2000 mg/kg

LD50 Skin Rat > 2000 mg/kg

fatty acids, C18 unsatd., a) acute toxicity

dimers,oligomeric reaction products with teta

LD50 Oral Rat > 2000 mg/kg

LD50 Skin Rat > 2000 mg/kg

2,4,6tris (dimethylaminomethyl)

phenol

LD50 Oral Rat = 2169 mg/kg

LD50 Skin Rat = 1280 mg/kgLD50 Oral Rat = 1200 mg/kg

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

LC50 Inhalation Dust Rat > 5,01 mg/l 4h

LD50 Oral Rat = 1030 mg/kg LD50 Skin Rat > 2000 mg/kg LD50 Oral Rat = 1030 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

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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:

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

List of components with eco-toxicological properties

List of components with eco toxicological properties				
Ident. Numb.	Ecotox Infos			
CAS: 103758-98-1 - EINECS: 500-289-8	a) Aquatic acute toxicity: LC50 Fish = 7,07 mg/L 96			
	a) Aquatic acute toxicity: EC50 Daphnia = 5,18 mg/L 48			
	a) Aquatic acute toxicity: EC50 Algae = 2,63 mg/L 72			
	c) Bacteria toxicity: NOEC Bacteria = 1,41 mg/L			
CAS: 68082-29-1 - EINECS: 500-191-5	a) Aquatic acute toxicity: LC50 Algae = 1,25 mg/L 72			
	a) Aquatic acute toxicity: EC50 Fish = 7,07 mg/L 96			
	a) Aquatic acute toxicity: EC50 Algae > 4,34000 mg/L 72			
	a) Aquatic acute toxicity: LC50 Fish > 10,00000 mg/L 96			
	a) Aquatic acute toxicity: EC10 Algae > 130,00000 mg/L 72			
CAS: 90-72-2 - EINECS: 202-013-9	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			
CAS: 2855-13-2 - EINECS: 220-666-8 - INDEX: 612-067-00-9	a) Aquatic acute toxicity: LC50 Fish = 110 mg/L 96			
	a) Aquatic acute toxicity: EC50 Daphnia = 23 mg/L 48			
	a) Aquatic acute toxicity: EC50 Daphnia = 388 mg/L 48			
	a) Aquatic acute toxicity: EC50 Algae > 50 mg/L 72			
	b) Aquatic chronic toxicity: NOEC Daphnia = 3 mg/L - 21 d			
	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			
	Ident. Numb. CAS: 103758-98-1 - EINECS: 500-289-8 CAS: 68082-29-1 - EINECS: 500-191-5 CAS: 90-72-2 - EINECS: 202-013-9 CAS: 2855-13-2 - EINECS: 220-666-8 -			

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.

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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. (isophoronediamine solution) IATA-Technical name: AMINES, LIQUID, CORROSIVE, N.O.S. (isophoronediamine solution) IMDG-Technical name: AMINES, LIQUID, CORROSIVE, N.O.S. (isophoronediamine solution)

14.3. Transport hazard class(es)

ADR-Class: 8
IATA-Class: 8
IMDG-Class: 8

14.4. Packing group

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

14.5. Environmental hazards

Marine pollutant: Yes Environmental Pollutant: Yes

14.6. Special precautions for user

Road and Rail (ADR-RID) :

ADR-Label: 8

ADR-Hazard identification number: 80

ADR-Special Provisions: 274

ADR-Transport category (Tunnel restriction code): 3 (E)

Air (IATA):

IATA-Passenger Aircraft: 852 IATA-Cargo Aircraft: 856

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: 223 274

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

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VOC (2004/42/EC): N.A. 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)

Regulation (EU) n. 2017/776 (ATP 10 CLP)

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category Lower-tier threshold according to Annex 1, part 1 (tonnes) Upper-tier threshold (tonnes)

Products belongs to category E2 200 500

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.
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.
H373	May cause damage to organs through prolonged or repeated exposure.
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/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
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.4.2/1-1A-1B	Skin Sens. 1,1A,1B	Skin Sensitisation, Category 1,1A,1B
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/C2	Aquatic Chronic 2	Chronic (long term) aquatic hazard, 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

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[CLP]:

Classification according to Regulation Classification procedure (EC) Nr. 1272/2008

3.2/1C Calculation method
3.3/1 Calculation method
3.4.2/1B Calculation method
3.9/2 Calculation method
4.1/C2 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

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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
- 5. FIRE-FIGHTING MEASURES
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 11. TOXICOLOGICAL INFORMATION
- 12. ECOLOGICAL INFORMATION
- 13. DISPOSAL CONSIDERATIONS
- 15. REGULATORY INFORMATION
- 16. OTHER INFORMATION

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