

Printing date 27.05.2015 Revision: 27.05.2015

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

· 1.1 Product identifier

· Trade name: HADALAN EG145 13E, Komp. B

· Article number: 50208 B

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

No further relevant information available.

· Application of the substance / the mixture

Rapid-hardening, two-component epoxy resin for priming mineral substrates with risk of moisture penetration from the back surface

· 1.3 Details of the supplier of the safety data sheet

· Manufacturer/Supplier:

Heinrich Hahne GmbH & Co. KG

Heinrich-Hahne-Weg 11

45711 Datteln

Tel.:02363/5663-0

· Further information obtainable from:

Abteilung: Produktsicherheit

Tel.: 02363 5663-0

EMail: in fo@hahne-bautenschutz.de

· 1.4 Emergency telephone number:

Giftinformationszentrum Nord (GIZ Nord) Universität Göttingen,

Tel.: 0551-19240

# SECTION 2: Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008



GHS08 health hazard

Repr. 2 H361f Suspected of damaging fertility.



GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed. Acute Tox. 4 H332 Harmful if inhaled.

Skin Sens. 1 H317 May cause an allergic skin reaction. STOT SE 3 H335 May cause respiratory irritation.

- · Classification according to Directive 67/548/EEC or Directive 1999/45/EC
- · Hazard description:

C Corrosive

N Dangerous for the environment

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#### · Information concerning particular hazards for human and environment:

R 20/22 Harmful by inhalation and if swallowed.

R 35 Causes severe burns.

R 43 May cause sensitisation by skin contact.

*R 62 Possible risk of impaired fertility.* 

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### · Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

#### · 2.2 Label elements

### · Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

· Hazard pictograms









GHS09

GHS05 GHS07 GHS08

# · Signal word Danger

### · Hazard-determining components of labelling:

1,3-Benzendimethanamin, N-(2-Cyanoethyl)-Derivate

4-tert-butylphenol

*m-phenylenebis*(*methylamine*)

trimethylhexane-1,6-diamine

#### · Hazard statements

H302+H332 Harmful if swallowed or if inhaled.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction. H361f Suspected of damaging fertility.

*H335 May cause respiratory irritation.* 

H411 Toxic to aquatic life with long lasting effects.

#### · Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

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

P262 Do not get in eyes, on skin, or on clothing.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/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.

P332+P313 If skin irritation occurs: Get medical advice/attention.

## · 2.3 Other hazards

- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

# SECTION 3: Composition/information on ingredients

- · 3.2 Chemical characterisation: Mixtures
- · Description: Amine-containing curing agent for epoxy resin.

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· Dangerous compone	ents:	
CAS: 98-54-4	4-tert-butylphenol	>25 - < 50%
EINECS: 202-679-0	<b>X</b> Xn R62; <b>X</b> Xi R37/38-41; <b>Y</b> N R51/53	
	Repr. 2, H361f;	
CAS: 90194-00-6	1,3-Benzendimethanamin, N-(2-Cyanoethyl)-Derivate	>25- < 50%
	C R34; Xn R20/22; Xi R43 R52/53	
	♦ Skin Corr. 1B, H314;	
CAS: 1477-55-0	m-phenylenebis(methylamine)	>10- <25%
EINECS: 216-032-5	<u>₹</u> C R34; <b>X</b> Xn R22	
	Skin Corr. 1B, H314;	
CAS: 25620-58-0	trimethylhexane-1,6-diamine	>5 - <10%
EINECS: 247-134-8	<u>₹</u> C R34; <b>X</b> Xn R22; <b>X</b> Xi R43	
	♦ Skin Corr. 1B, H314; ♦ Acute Tox. 4, H302; Skin Sens. 1, H317	

#### · Additional information:

For the wording of the listed risk phrases refer to section 16.

GISCODE: RE 1 (resin + hardener)

# SECTION 4: First aid measures

- · 4.1 Description of first aid measures
- · General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

- $\cdot \textit{After skin contact:} \ \textit{Immediately wash with water and soap and rinse thoroughly}.$
- · After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- · After swallowing: Drink plenty of water and provide fresh air. Call for a doctor immediately.
- 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
- 4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

# SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- · Suitable extinguishing agents: Foam (alcohol resistent), carbon dioxide, dry powder, water spray
- · For safety reasons unsuitable extinguishing agents: Water jet.
- 5.2 Special hazards arising from the substance or mixture No further relevant information available.
- · 5.3 Advice for firefighters
- · Protective equipment: Put on breathing apparatus.

### SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.

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#### · 6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/surface or ground water.

#### · 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

### · 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

# **SECTION 7:** Handling and storage

#### · 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Only store in original containers.

- · Information about fire and explosion protection: No special measures required.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Store in original container.
- $\cdot \textit{Information about storage in one common storage facility:} Store \textit{ away from foodstuffs, beverages and feed.}$
- · Further information about storage conditions:

Keep container tightly closed.

Protect from frost.

- · Storage class: VCI: 8
- · 7.3 Specific end use(s) No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:				
98-54-4 4-tert-butylphenol (25-50%)				
	AGW			
	0.5 mg/m3, 0.08 ml/m3			
	2(II); DFG, H			
90194-00-6 1,3-Benzendimethanar	nin, N-(2-Cyanoethyl)-Derivate (25-50%)			
ACGIH (USA) instantaneous value   0.1 mg / m³ SKIN				
1477-55-0 m-phenylenebis(methylamine) (10-25%)				
WEL	see Section IV			

- · Additional information: The lists valid during the making were used as basis.
- · 8.2 Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

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#### · Respiratory protection:

Not required if good ventilation. In inadequately ventilated places and during spraying respiratory protection. A/P2 filter.

### · Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

### · Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Wear safety gloves made of nitrile rubber with a thickness < 0.4 mm (penetration time> 480 min - see also www.gisbau.de

#### · Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Tightly sealed goggles • Body protection: Protective clothing.

# SECTION 9: Physical and chemical properties

General Information	
Appearance:	71
Form:	Liquid
Colour:	yellowish
Odour:	aminic
pH-value at 20 °C:	8.5 - 11
Change in condition	
Melting point/Melting range:	
Boiling point/Boiling range:	>200 °C
Flash point:	140 °C
Ignition temperature:	510 °C
Self-igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Vapour pressure at 50 °C:	< 5 hPa
Density at 20 °C:	$1.06 \text{ g/cm}^3$
Solubility in / Miscibility with	
water:	Not miscible or difficult to mix.
Viscosity:	
Dynamic at 20 °C:	500 mPas
Solvent content:	
Organic solvents:	0 %
9.2 Other information	No further relevant information available.

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### SECTION 10: Stability and reactivity

- · 10.1 Reactivity
- · 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions No dangerous reactions known.
- · 10.4 Conditions to avoid No further relevant information available.
- · 10.5 Incompatible materials:

Keep away from strongly acidic and alkaline materials as well as oxidizing agents in order to avoid exothermic reactions.

• 10.6 Hazardous decomposition products: At > 60 °C elimination of acrylonitrile possible.

# SECTION 11: Toxicological information

- · 11.1 Information on toxicological effects
- · Acute toxicity:

	-1151		
LD/LC50 values relevant for classification:			
1477-55-0	m-phenyle	enebis(methylamine)	
Oral	LD50	1040 mg/kg (rat)	
Dermal	LD50	2000 mg/kg (rab)	
Inhalative	LC50/4 h	2.4 mg/l (rat)	
98-54-4 4-	tert-butylp	henol	
Oral	LD50	2951 mg/kg (rat)	
Dermal	LD50	2288 mg/kg (rbt)	

- · Primary irritant effect:
- · on the skin: Caustic effect on skin and mucous membranes.
- · on the eye: Strong caustic effect.
- · Sensitisation: Sensitisation possible through skin contact.
- · Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· Acute effects (acute toxicity, irritation and corrosivity)

Repeated dose toxicity

Information on ingredients tested: In humans, effects have been observed on the following organs:

Liver. Skin. Thyroid. Spleen. In animals, effects have been reported on the following organs:

Gastrointestinal tract.

Chronic Toxicity and Carcinogenicity

Information about the tested ingredients: dietary intake has caused enige tumors in the first part of the stomach.

developmental toxicity

Contains components which did not cause birth defects in laboratory animals.

reproductive toxicity

In animal studies, effects of components on reproduction were seen only at doses that were significantly toxic to the parent animals .

Genotoxicity

Contains components which in - vitro genetic toxicity studies were negative and positive in others in some.

Contains component (s) of (the) in in vitro studies on genotoxicity was negative (s).

Animal genetic toxicity studies were negative.

Toxicity of the component - 4-tert- butylphenol

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Inhalation LC50 , 4 h , Aerosol , Rat , male and female  $> 5,600 \ mg \ / \ m^3$ 

Component Toxicology - 1.3 - Benzendimethanamin

Inhalation LC50, 4h, rat, male > 1.42 mg/l

Inhalation LC50, 4h, rat, female 0.8 mg/l

# SECTION 12: Ecological information

#### · 12.1 Toxicity

Data for part of 1,3- Benzendimethanamin, N-(2- cyanoethyl) - derivative:

The product is harmful to aquatic organisms ( LC50/EC50/IC50 between 10 and 100 mg / L in most sensitive species).

Data for part of 4- tert-butylphenol

The product is toxic to aquatic organisms ( LC50/EC50/IC50 1-10 mg / L in most sensitive species).

Acute and chronic toxicity to fish

LC50, golden orfe (Leuciscus idus), 48 h: 1.6 mg/l

Acute aquatic toxicity to invertebrates

EC50 Daphnia magna (Water flea ) 48 h , immobilization : 3.9 to 6.7 mg / l

Toxicity to aquatic plants

EC50, green alga Pseudokirchneriella subcapitata (formerly known as Selenastrum)

Toxicity to microorganisms

EC50; bacteria, 16 h: 227 mg/l

Chronic toxicity value for aquatic invertebrates

Daphnia magna ( water flea) , semi-static , 21 d , number of offspring , NOEC : 0.73 mg / l

Data for Component: 1,3 - Benzendimethanamin

The product is harmful to aquatic organisms ( LC50/EC50/IC50 between 10 and 100 mg / L in most sensitive species).

Acute and chronic toxicity to fish

LC50, golden orfe (Leuciscus idus), 96 h: 75 mg/l

Acute aquatic toxicity to invertebrates

EC50 Daphnia magna (water flea), static, 48 h, immobilization: 15.2 mg/l

Toxicity to aquatic plants

EC50, alga Scenedesmus sp, static, biomass growth inhibition, 72 h: . 12mg/l

Data for Component: trimethyl -1,6-diamine

The product is harmful to aquatic organisms ( LC50/EC50/IC50 between 10 and 100 mg / L in most sensitive species). Can increase the pH of aquatic systems to > pH 10, which may be toxic to aquatic organisms.

Acute and chronic toxicity to fish

LC50, golden orfe (Leuciscus idus), static, 48 h: 172 mg/l

Acute aquatic toxicity to invertebrates

EC50 Daphnia magna (Water flea ) 24 h, immobilization : 31.5 mg/l

Toxicity to aquatic plants

ErC50, alga Scenedesmus sp, Growth rate inhibition, 72 h:. 29.5 mg/l

Toxicity to microorganisms

EC50; bacteria, 17 h: 89 mg/l

· Aquatic toxicity: No further relevant information available.

### · 12.2 Persistence and degradability

Data for part of 1,3- Benzendimethanamin, N- (2- cyanoethyl) - derivatives.

No relevant data found.

Data for part of 4- tert-butylphenol

Material is readily biodegradable according to OECD test (s) for ready biodegradability.

 $OECD\ Biodegradation\ Tests:$ 

Biodegradation Exposure Time Method 10 -day window

60 % 28 d OECD 301F test failed

98 % 28 d OECD 301A test successfully

Data for Component: 1,3 - Benzendimethanamin

Material is inherently biodegradable. Achievements in OECD test (s) for potential ioabbaubarkeit > 20%. Based on stringent OECD test guidelines, this material can not be considered as readily biodegradable;

however, the test results do not necessarily mean that the material

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under environmental conditions is not biodegradable.

OECD Biodegradation Tests:

Biodegradation Exposure Time Method 10 -day window

49 % 28 d OECD 301B test failed

22 % 28 d OECD 302C Test Not applicable

Data for Component: trimethyl -1,6-diamine

Based on stringent OECD test guidelines, this material can not be considered as readily biodegradable;

however, the test results do not necessarily mean that the material under

Environmental conditions is not degradable.

OECD Biodegradation Tests:

Biodegradation Exposure Time Method 10 -day window

37 % 21 d OECD 301E Test not passed 13 % 28 d OECD test 302B Not applicable 2.2% 3 d OECD 303A Test Not applicable

### · 12.3 Bioaccumulative potential

Data for part of 1,3- Benzendimethanamin, N- (2- cyanoethyl) - derivatives.

Bioaccumulation: No relevant data found.

Data for part of 4- tert-butylphenol

Bioaccumulation: Bioconcentration potential is moderate. (BCF between 100 and 3000 or Log Pow between 3 and 5).

Partition coefficient n-octanol/water (log Pow): 3.29 OECD test 107 (shake-flask)

Bioconcentration factor (BCF): 48-88; carp (Cyprinus carpio) measured 120; ide (Leuciscus idus), measured

Data for Component: 1,3 - Benzendimethanamin

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient n-octanol/water (log Pow): 0.18 OECD test 107 (shake-flask)

Bioconcentration factor (BCF): < 3; carp (Cyprinus carpio), measured

Data for Component: trimethyl -1,6-diamine

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient n-octanol/water (log Pow): 0.77 measured

#### · 12.4 Mobility in soil

Data for part of 1,3- Benzendimethanamin, N-(2- cyanoethyl) - derivatives.

Mobility in soil: No relevant data found.

Data for part of 4- tert-butylphenol

Mobility in soil: Potential for mobility in soil is low (Koc between 500 - 2000).

Soil organic carbon / water ( Koc ): 582 ( estimated)

Henry's law constant (H): 1.19 E -06 atm \* m<sup>3</sup> / mol; Measured 25 °C

Data for Component: 1,3 - Benzendimethanamin

Mobility in soil: Potential for mobility in soil is low (Koc between 500 - 2000), due to the very low Henry's constant, volatilization from natural bodies of water or moist soil is very low and is not expected to be an important fate.. Soil organic carbon/water (Koc): 910 (estimated)

Henry's Law constant (h): 6,94 E-11 \*  $m^3$  atm/mol; 25 °C (estimated)

Data for Component: trimethyl -1,6-diamine

Mobility in soil: Potential for mobility in soil is low (Koc between 500 - 2000), due to the very low Henry's constant, volatilization from natural bodies of water or moist soil is very low and is not expected to be an important fate..

Soil organic carbon / water ( Koc ): 1200 (estimated)

Henry's law constant (H): 3.12 E-09 atm \*  $m^3$  / mol; 25 °C Estimated on the basis of the vapor pressure and water solubility

- · Ecotoxical effects:
- · Remark: Harmful to fish
- · Additional ecological information:
- · General notes:

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Danger to drinking water if even small quantities leak into the ground.

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Harmful to aquatic organisms

# · 12.5 Results of PBT and vPvB assessment

Data for part of 1,3-Benzendimethanamin, N-(2-cyanoethyl)-derivatives.

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Data for part of 4-tert-butylphenol

This substance is not considered to be persistent, bioaccumulative and toxic (PBT).

This substance is not considered to be very persistent nor very bioaccumulative (vPvB).

Data for Component: 1,3-Benzendimethanamin

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Data for Component: trimethyl-1,6-diamine

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

- · **PBT**: Not applicable.
- · vPvB: Not applicable.
- · 12.6 Other adverse effects

Data for part of 1,3-Benzendimethanamin, N-(2-cyanoethyl)-derivatives.

No data available.

Data for part of 4-tert-butylphenol

This substance is not included in Annex I to Regulation (EC) 2037/2000 on substances that deplete the ozone

Data for Component: 1,3-Benzendimethanamin

This substance is not included in Annex I to Regulation (EC) 2037/2000 on substances that deplete the ozone

Data for Component: trimethyl-1,6-diamine

# SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

08 01 11\* waste paint and varnish containing organic solvents or other dangerous substances

- · Uncleaned packaging:
- · Recommendation: Disposal must be made according to official regulations.

· 14.1 UN-Number · ADR, IMDG, IATA	UN2735
· 14.2 UN proper shipping name	
·ADR	2735 AMINES, LIQUID, CORROSIVE, N.O.S. (mphenylenebis(methylamine)), ENVIRONMENTALL HAZARDOUS
· IMDG	AMINES, LIQUID, CORROSIVE, N.O.S. (mphenylenebis(methylamine)), MARINE POLLUTANT
· IATA	AMINES, LIQUID, CORROSIVE, N.O.S. (mphenylenebis(methylamine))

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· 14.3 Transport hazard class(es)	
· ADR, IMDG	
· Class	8 Corrosive substances.
· Label	8
· IATA	
· Class	8 Corrosive substances.
· Label	8
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards:	
· Marine pollutant:	Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Corrosive substances.
· Danger code (Kemler):	80
· EMS Number:	F- $A$ , $S$ - $B$
· Segregation groups	Alkalis
· 14.7 Transport in bulk according to Anne	x II of
MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
· <i>ADR</i>	
· Limited quantities (LQ)	5L
· Transport category	3
· Tunnel restriction code	E
· UN ''Model Regulation'':	UN2735, AMINES, LIQUID, CORROSIVE, N.O.S. (mphenylenebis(methylamine)), ENVIRONMENTALL HAZARDOUS, 8, III

# SECTION 15: Regulatory information

- $\cdot$  15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · National regulations:
- · Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.
- · Other regulations, limitations and prohibitive regulations

For activities involving exposure to uncured epoxy resins and contact on the skin or respiratory are causing regular preventive medical examinations.

This product is subject to the Directive 2004/42/EC.

EU limit value of this product is in ready to use condition: 500 g / l (2010). The product contains: 0 g / l VOC.

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· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

#### · Relevant phrases

- 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.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H361f Suspected of damaging fertility.
- H411 Toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.
- R20/22 Harmful by inhalation and if swallowed.
- R22 Harmful if swallowed.
- R34 Causes burns.
- R37/38 Irritating to respiratory system and skin.
- R41 Risk of serious damage to eyes.
- R43 May cause sensitisation by skin contact.
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- *R62 Possible risk of impaired fertility.*

#### · Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Repr. 2: Reproductive toxicity, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

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