# **SAFETY DATA SHEET**

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

**Product identifier** 

Trade name or designation

of the mixture

Super Sap CLV Epoxy Resin

Identification Number Not applicable.

Registration number -

Synonyms None.

Date of first issue 01-June-2012

Version number 01

Revision date 
Supersedes date -

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

Identified uses Liquid epoxy resin for compositions for the building and civil engineering industries e.g. flooring

compounds, primers, adhesives, mortars, joints and grouts. Offshore & Marine applications.

Uses advised against Not available.

Details of the supplier of the safety data sheet

Company name Entropy Resins

Address Hijos De A. Ferrer-Dalmau

C/ Rosalia de Castro 21

08025 Barcelona

Spain

Telephone

e-mail Contact person: Jaime Ferrer-Delmau

Emergency telephone

Number info@entropyresins.com

24/7 Emergency Hotline : 1 (760) 476-3962 Global Response Access Code: 333178

## **Section 2: Hazards identification**

#### Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

#### Classification according to Directive 67/548/EEC or 1999/45/EC as amended

Classification Xi;R36/38, R43, N;R51-53

The full text for all R-phrases is displayed in section 16.

# Classification according to Regulation (EC) No 1272/2008 as amended

**Health hazards** 

Skin corrosion/irritation Category 2 Causes skin irritation.

Serious eye damage/eye irritation Category 2 Causes serious eye irritation.

Skin sensitization Category 1 May cause an allergic skin

reaction.

**Environmental hazards** 

Hazardous to the aquatic environment - Category 2 Toxic to aquatic life with long

long-term hazard lasting effects.

**Hazard summary** 

Physical hazards Not classified for physical hazards.

**Health hazards** Irritating to eyes and skin. May cause sensitisation by skin contact.

**Environmental hazards** Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

**Specific hazards** Ingestion may cause irritation and malaise.

**Main symptoms** Symptoms include itching, burning, redness, and tearing of eyes. Rash.

Label elements

 Super Sap CLV Epoxy SDS
 SDS UK

 Code: SDS\_11\_CLV
 Version No.: 01
 Revision date: 01-June-2012
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## Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Reaction product:

bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)



Signal word Warning

Hazard statements Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction. Toxic to

aquatic life with long lasting effects.

**Precautionary statements** 

**Prevention** Wear protective gloves. Wear eye/face protection. Avoid breathing mist/vapours/spray. Wash

thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Avoid release to the environment.

**Response** Collect spillage. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs:

Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get

603-074-00-8

medical advice/attention. Take off contaminated clothing and wash before reuse.

**Storage** Store as indicated in Section 7.

**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information

Other hazards Contains epoxy constituents. May produce an allergic reaction.

No other specific acute or chronic health impact noted.

## Section 3: Composition/information on ingredients

#### **Mixture**

#### **General information**

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes

25068-38-6

500-033-5

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular

weight ≤ 700)

**DSD:** Xi;R36/38, R43, N;R51-53

50-80

CLP: Skin Irrit. 2;H315, Skin Sens. 1;H317, Eye Irrit. 2;H319, Aquatic Chronic 2;H411

Oxirane, mono [(C12-14-alkyloxy)methyl] derivatives

Classification:

10-20 68609-97-2 -

Classification: DSD: Xi;R36/38, R43, N;R51-53

CLP: Skin Irrit. 2;H315, Skin Sens. 1;H317, Eye Irrit. 2;H319, Aquatic Chronic 2;H411

Benzyl alcohol <10 100-51-6 - 603-057-00-5

202-859-9

Classification: DSD: Xn;R20/22

CLP: Acute Tox. 4;H302, Acute Tox. 4;H312, Skin Irrit. 2;H315, Skin Sens. 1;H317, Acute Tox.

4;H332, Aquatic Chronic 2;H411

CLP: Regulation No. 1272/2008. DSD: Directive 67/548/EEC.

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in

percent by volume.

The full text for all R- and H-phrases is displayed in section 16.

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#### Section 4: First aid measures

**General information** 

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Description of first aid measures

Inhalation

Move to fresh air. Get medical attention if any discomfort occurs.

Skin contact

Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation develops and persists. In case of rashes, wounds or other skin disorders: Seek medical attention and bring along these instructions.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Never give anything by mouth to an unconscious person. Get medical attention if any discomfort occurs. If ingestion of a large amount does occur, call a poison control centre immediately.

Most important symptoms and effects, both acute and delayed Symptoms include itching, burning, redness, and tearing of eyes. Rash.

Indication of any immediate medical attention and special Treat symptomatically.

treatment needed

# Section 5: Firefighting measures

General fire hazards

May burn, but does not ignite readily.

Extinguishing media

Suitable extinguishing

media

Carbon dioxide, regular foam, dry chemical, water spray, or water fog.

Unsuitable extinguishing

media

Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

During fire, gases hazardous to health may be formed.

Advice for firefighters

Special protective equipment for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in

the workplace.

Special firefighting

procedures

Water runoff can cause environmental damage.

#### Section 6: Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

For non-emergency

personnel

Avoid contact with skin and eyes. See Section 8 for personal protective equipment.

For emergency responders

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the

**Environmental precautions** 

Do not contaminate water. Avoid release to the environment. Refer to special instructions/safety

data sheets.

Methods and material for containment and cleaning up Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Prevent product from entering drains.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use. For waste disposal, see section 13.

Reference to other sections

See Section 8 for personal protective equipment.

For waste disposal, see Section 13.

## Section 7: Handling and storage

Precautions for safe handling

Provide adequate ventilation. Persons with epoxy allergy should not work with this product. Follow special provisions related to work with this material. Avoid contact with skin and eyes. Wear respiratory protection during operations where spraying or misting occurs. Use Personal Protective Equipment recommended in section 8 of the MSDS. Change contaminated clothing. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store in tightly closed original container in a dry, cool and well-ventilated place. Store away from incompatible materials.

SDS UK Super Sap CLV Epoxy SDS Code: SDS\_11\_CLV Version No.: 01 Revision date: 01-June-2012 3/8 Specific end use(s)

Compositions for the building and civil engineering industries e.g. flooring compounds, primers,

adhesives, mortars, joints and grouts.

## Section 8: Exposure controls/personal protection

Control parameters

Occupational exposure limits No exposure limits noted for the ingredient(s).

**Biological limit values** No biological exposure limits noted for the ingredient(s).

Recommended monitoring

procedures

Follow standard monitoring procedures.

**DNEL** 

Not available.

**PNEC** 

Not available.

**Exposure controls** 

Appropiate engineering

controls

Provide adequate ventilation.

Individual protection measures, such as personal protective equipment

**General information** Follow special provisions related to work with this material. Personal protective equipment should

be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Private clothes and working clothes should be kept separately. Make sure

to provide adequate control by applying the "COSHH Essentials" procedure.

Eye/face protection Wear approved safety goggles.

Skin protection

Wear protective gloves. Be aware that the liquid may penetrate the gloves. Frequent change is - Hand protection

advisable. Use protective gloves made of: Polyethylene/Ethylene Vinyl Alcohol (PE/EVAL).

Suitable gloves can be recommended by the glove supplier.

- Other Protection suit must be worn. Seek advice from local supervisor.

Respiratory protection No personal respiratory protective equipment normally required. In case of inadequate ventilation

or risk of inhalation of vapours, use suitable respiratory equipment with gas filter (type A2).

Observe special requirements if using the product for spraying.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures Always observe good personal hygiene measures, such as washing after handling the material

and before eating, drinking and/or smoking. Routinely wash work clothing to remove

contaminants. Discard contaminated footwear that cannot be cleaned.

**Environmental exposure** 

Environmental manager must be informed of all major releases.

## Section 9: Physical and chemical properties

Information on basic physical and chemical properties

Clear/pale yellow liquid. **Appearance** 

Physical state Liquid. Form Liquid.

> Colour Clear/pale yellow.

Odour Slight.

**Odour threshold** Not available. Not applicable. pН Melting point/freezing Not available.

point

Boiling point, initial boiling point, and boiling range

Not available.

> 200 °C (> 392 °F) Flash point **Auto-ignition temperature** Not applicable. Flammability (solid, gas) Not available. Not available. Flammability limit - lower

(%)

Not available. Flammability limit - upper

(%)

Super Sap CLV Epoxy SDS Code: SDS\_11\_CLV Version No.: 01 Revision date: 01-June-2012 4/8

Not applicable. **Oxidising properties Explosive properties** Not applicable. **Explosive properties** Not applicable. Vapour pressure Not applicable. Not applicable. Vapour density Not applicable. **Evaporation rate** Not available. Relative density

1100 - 1200 kg/m3 @ 25 °C Density

Negligible. Solubility Partition coefficient Not available.

(n-octanol/water)

Not available.

Decomposition temperature

Not applicable. **Bulk density** Pour point Not applicable. Not available. **Viscosity** Not available. VOC (Weight%) Percent volatile Not available.

Other data

**Dynamic viscosity** 8 - 13 Pa·s @ 25 °C

Other information No relevant additional information available.

## Section 10: Stability and reactivity

Reactivity Reacts with oxidising agents.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous

Polymerises exothermically with amines, mercaptens and Lewis acids at ambient temperature reactions and above. Polymerises in contact with bases (eg caustic soda), ammonia, primary and

secondary amines, alcohol's and acids.

Conditions to avoid Contact with incompatible materials. Heat, flames and sparks. Avoid temperatures exceeding the

flash point.

Incompatible materials Caustic soda. Strong oxidising agents.

Hazardous decomposition

products

None under normal temperatures and pressures.

# **Section 11: Toxicological information**

Persons with epoxy allergy should not work with this product. Persons with pre-existing skin **General information** 

disorders may be more susceptible to the effects of the product.

Information on likely routes of exposure

Ingestion May cause discomfort if swallowed.

Under normal conditions of intended use, this material is not expected to be an inhalation hazard. Inhalation

Skin contact Causes skin irritation.

Eye contact Causes serious eye irritation.

Symptoms include itching, burning, redness, and tearing of eyes. Rash. Symptoms

Information on toxicological effects

Ingestion may cause irritation and malaise. Acute toxicity

**Product Test results** 

Super Sap CLR Epoxy Resin (Mixture) Acute Oral LD50 Rat: > 10000 mg/kg

Skin corrosion/irritation May cause redness and pain.

Serious eye damage/eye

irritation

Exposed may experience eye tearing, redness, and discomfort.

Not available. Respiratory sensitization

May cause an allergic skin reaction. Skin sensitization

Germ cell mutagenicity Positive in vitro, but negative in vivo assays.

Not classified. Carcinogenicity Not available. Reproductive toxicity Specific target organ Not available.

toxicity - single exposure

SDS UK Super Sap CLV Epoxy SDS Code: SDS\_11\_CLV Version No.: 01 Revision date: 01-June-2012 5/8 Specific target organ toxicity - repeated exposure

Not available.

**Aspiration hazard** 

Mixture versus substance

information

Not applicable.

No additional adverse health effects noted.

Other information Not available

# **Section 12: Ecological information**

**Toxicity** No toxicity data noted for the ingredient(s). Persistence and The product is not readily biodegradable.

degradability

Bioaccumulative potential Has the potential to bioaccumulate.

Mobility The product is insoluble in water and will sediment in water systems.

Not available. **Environmental fate -**

Partition coefficient

Mobility in soil

Not available. Results of PBT and Not available. vPvB assessment

Toxic to aquatic life with long lasting effects. Other adverse effects

# **Section 13: Disposal considerations**

Waste treatment methods

Residual waste Dispose of in accordance with local regulations.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is

emptied.

EU waste code 16 05 08\*

Disposal methods/information This material and its container must be disposed of as hazardous waste. Do not discharge into

drains, water courses or onto the ground. Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and

material characteristics at time of disposal.

#### **Section 14: Transport information**

**ADR** 

UN3082 **UN** number

**UN proper shipping name** Environmentally hazardous substance, liquid, n.o.s. (Reaction product:

bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700))

9 Transport hazard class(es) - 111 Subsidiary class(es) Yes Packing group F **Environmental hazards Tunnel restriction code** 9

Labels required Not available

Special precautions for user

RID

Environmentally hazardous substance, liquid, n.o.s. (Reaction product: **UN number** 

bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)) **UN proper shipping name** 

9

- 111 Transport hazard class(es) Subsidiary class(es) Yes Packing group

Not available. **Environmental hazards** 

Labels required

Special precautions for user UN3082

**ADN** 

Environmentally Hazardous Liquid, N.o.s. (Reaction product: bisphenol-A-(epichlorhydrin); epoxy

resin (number average molecular weight ≤ 700)) **UN** number 9

UN proper shipping name - 111

Yes. Transport hazard class(es)

Subsidiary class(es) **Packing group** 

**Environmental hazards** 

Labels required

SDS UK Super Sap CLV Epoxy SDS Code: SDS\_11\_CLV Version No.: 01 Revision date: 01-June-2012

Not available. Special precautions for user

ΙΔΤΔ

**UN** number UN3082

**UN proper shipping name** Environmentally hazardous substance, liquid, n.o.s. (Reaction product:

bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700))

Transport hazard class(es) - 111 Subsidiary class(es) Yes. Packing group **Environmental hazards** 

Labels required Not available.

Special precautions for user

**IMDG** UN3082

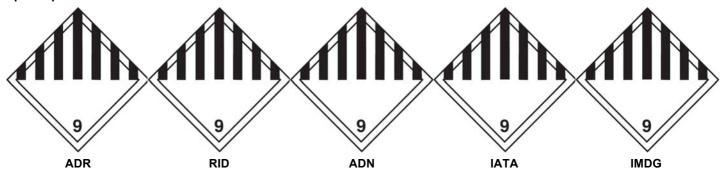
Environmentally hazardous substance, liquid, n.o.s. (Reaction product: **UN number** 

bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)) **UN proper shipping name** 

- 111 Transport hazard class(es) Yes. Subsidiary class(es) Packing group 9 F-A, S-F Marine pollutant Labels required Not available.

EmS No.

Special precautions for user



Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No information available.

### Section 15: Regulatory information

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

**EU Regulations** 

Regulation (EC) No. 2037/2000 on substances that deplete the ozone layer, Annex I

Regulation (EC) No. 2037/2000 on substances that deplete the ozone layer, Annex II

Regulation (EC) No. 850/2004 on persistent organic pollutants, Annex I

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V

Directive 96/61/EC concerning integrated pollution prevention and control (IPPC): Article 15, European Pollution **Emission Registery (EPER)** 

Not listed.

Regulation (EC) No. 1907/2006, Article 59(1). Candidate List

Not listed.

Other regulations Young people under 18 years old are not allowed to work with this product according to EU

Directive 94/33/EC on the protection of young people at work. This Safety Data Sheet complies

with the requirements of Regulation (EC) No 1907/2006 as amended.

National regulations

**Chemical Safety Assessment** No Chemical Safety Assessment has been carried out.

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## **Section 16: Other information**

**List of abbreviations** DNEL: Derived No-Effect Level.

PNEC: Predicted No-Effect Concentration. PBT: Persistent, bioaccumulative and toxic. vPvB: Very Persistent and very Bioccumulative.

References Not available.

Information on evaluation method leading to the classification of mixture

The mixture is classified based on test data for physical hazards. The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if

available. For details, refer to Sections 9, 11 and 12.

Full text of any statements or R-phrases and H-phrases under Sections 2 to 15 R36/38 Irritating to eyes and skin.

R43 May cause sensitisation by skin contact.

R51 Toxic to aquatic organisms.

R53 May cause long-term adverse effects in the aquatic environment.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation.

H411 - Toxic to aquatic life with long lasting effects.

**Training information** 

Not available.

**Disclaimer** The information in the sheet was written based on the best knowledge and experience currently

available.

 Super Sap CLV Epoxy SDS
 SDS UK

 Code: SDS\_11\_CLV
 Version No.: 01
 Revision date: 01-June-2012
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Safety Data Sheet

according to Regulation (EC) No. 453/2010

Revision date: 30/09/2013 Version: 1.0

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

1.1. Product Identifier

Product form : Mixture

Product Name : Super Sap® CLV Hardener

Product code : Not Applicable

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : For professional use only.

Use of the substance/mixture : Curing agent for Epoxy Resin

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Company

Entropy Resins, Inc. 30621 San Antonio St. Hayward, CA 94544

T 310.882.2120

www.entropyresins.com

1.4. Emergency Telephone Number

Emergency Number : +1-760.476.3962 (3E Company) Contract 333178

# **SECTION 2: Hazards identification**

#### 2.1. Classification of the Substance or Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute Tox. 4 (Oral) H302 Skin Corr. 1A H314 Eye Dam. 1 H318 Resp. Sens. 1 H334 Skin Sens. 1 H317 Repr. 2 H361 Aquatic Acute 1 H400 Aguatic Chronic 2 H411

Full text of H-phrases: see section 16

#### Classification according to Directive 67/548/EEC or 1999/45/EC

Xn; R22 C; R34 Xi; R41 Xn; R42 Xi; R43

Repr.Cat.3; R62 Repr.Cat.3; R63 N; R51/53 N; R50

Full text of R-phrases: see section 16

#### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label Elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :









Signal word (CLP) : Danger

Hazardous ingredients : Piperazine, 1-(2-Aminoethyl) piperazine, Trimethylhexamethylenediamine,

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Safety Data Sheet

according to Regulation (EC) No. 453/2010

Isophorone diamine, 4,7-Methano-1H-indenedimethanamine, octahydro-, 1,3-

Cyclohexanedimethanamine, 4-Nonylphenol, branched

Hazard statements (CLP) : H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H361 - Suspected of damaging fertility or the unborn child

H400 - Very toxic to aquatic life

H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (CLP) : P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P260 - Do not breathe vapors, mist, spray.

P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P272 - Contaminated work clothing should not be allowed out of the workplace.

P273 - Avoid release to the environment.

P280 - Wear protective gloves, protective clothing, eye protection, face protection.

P285 - In case of inadequate ventilation wear respiratory protection

P301+P312 - If swallowed, call a doctor if you feel unwell.

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.

 $\ensuremath{\mathsf{P304+P340}}$  - IF INHALED: Remove to fresh air and keep at rest in a position

comfortable for breathing.

P304+P341 - IF INHALED: If breathing is difficult, remove 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.

P308+P313 - If exposed or concerned: Get medical advice/attention.

P310 - Immediately call a POISON CENTER or doctor/physician.

P321 - Specific treatment (see section 4).

P330 - Rinse mouth.

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

P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or

doctor/physician.

P391 - Collect spillage.

P405 - Store locked up.

P501 - Dispose of contents/container according to local/national.

#### 2.3. Other Hazards

Other hazards not contributing to the classification

: Exposure may aggravate those with pre existing eye, skin, or respiratory conditions. May cause an allergic reaction in sensitive individuals.

# **SECTION 3: Composition/information on ingredients**

# 3.1. Substances

Not applicable

#### 3.2. Mixture

Name	Product Identifier	%	Classification according to Directive 67/548/EEC
Benzyl alcohol	(CAS No) 100-51-6 (EC no) 202-859-9 (EC index no) 603- 057-00-5	10 - 40	Xn; R20/22
1,3-Cyclohexanedimethanamine	(CAS No) 2579-20-6 (EC no) 219-941-5	> 30	Xn; R21/22 C; R35 R52/53

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Safety Data Sheet according to Regulation (EC) No. 453/2010

Name	Product Identifier	%	Classification according to Directive 67/548/EEC
Trimethylhexamethylenediamine	(CAS No) 25620-58-0 (EC no) 247-134-8	5 - 20	Xn; R22 C; R34 Xi; R41 R52/53 Xn; R42
4-Nonylphenol, branched substance listed as REACH Candidate (4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof])	(CAS No) 84852-15-3 (EC no) 284-325-5 (EC index no) 601- 053-00-8	5 - 20	Xn; R22 C; R34 N; R50/53 Repr.Cat.3; R62 Repr.Cat.3; R63
Isophorone diamine	(CAS No) 2855-13-2 (EC no) 220-666-8 (EC index no) 612- 067-00-9	5 - 10	Xn; R21/22 C; R34 Xi; R43 R52/53
Triethanolamine substance with national workplace exposure limit(s) (AT, BE, CZ, DK, ES, ET, FI, IE, IT, LT, PT, SE, SL)	(CAS No) 102-71-6 (EC no) 203-049-8	<= 5	Not classified
1-(2-Aminoethyl) piperazine	(CAS No) 140-31-8 (EC no) 205-411-0 (EC index no) 612- 105-00-4	<1	Xn; R22 C; R34 Xi; R43 R52/53 T; R24 Xi; R41
4,7-Methano-1H-indenedimethanamine, octahydro-	(CAS No) 68889-71-4 (EC no) 272-573-7	<1	Xn; R22 T; R24 Xi; R41 Xi; R43 Xi; R37
Name	Product Identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Benzyl alcohol	(CAS No) 100-51-6 (EC no) 202-859-9 (EC index no) 603- 057-00-5	10 - 40	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332
1,3-Cyclohexanedimethanamine	(CAS No) 2579-20-6 (EC no) 219-941-5	> 30	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Corr. 1A, H314 Aquatic Chronic 3, H412
Trimethylhexamethylenediamine	(CAS No) 25620-58-0 (EC no) 247-134-8	5 - 20	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412

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Safety Data Sheet

according to Regulation (EC) No. 453/2010

Name	Product Identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
4-Nonylphenol, branched substance listed as REACH Candidate (4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof])	(CAS No) 84852-15-3 (EC no) 284-325-5 (EC index no) 601- 053-00-8	5 - 20	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Repr. 2, H361f Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Isophorone diamine	(CAS No) 2855-13-2 (EC no) 220-666-8 (EC index no) 612- 067-00-9	5 - 10	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Triethanolamine substance with national workplace exposure limit(s) (AT, BE, CZ, DK, ES, ET, FI, IE, IT, LT, PT, SE, SL)	(CAS No) 102-71-6 (EC no) 203-049-8	<= 5	Not classified
1-(2-Aminoethyl) piperazine	(CAS No) 140-31-8 (EC no) 205-411-0 (EC index no) 612- 105-00-4	<1	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412
4,7-Methano-1H-indenedimethanamine, octahydro-	(CAS No) 68889-71-4 (EC no) 272-573-7	<1	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335

Full text of R-, H- and EUH-phrases: see section 16

# **SECTION 4: First aid measures**

4.1.	Descrip	tion of	First Aid	Measures
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First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Obtain medical

attention if breathing difficulty persists.

First-aid measures after skin contact : Wash contaminated clothing before reuse. Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after eye contact : Flush with plenty of water for at least 15 minutes. Seek medical advice if irritation develops or persists. Immediately call a POISON CENTER or doctor/physician.

Remove contact lenses, if present and easy to do. Continue rinsing.

First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Seek medical attention immediately.

## 4.2. Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms/injuries : Harmful if swallowed. Corrosive. Causes burns. May cause an allergic skin reaction. Inhalation may cause allergic respiratory reaction with asthma-like symptoms and difficulty breathing. Suspected of damaging fertility. Suspected of damaging the

unborn child.

Symptoms/injuries after inhalation : May cause respiratory irritation. Exposure may produce an allergic reaction. Symptoms/injuries after skin contact : Causes severe irritation which will progress to chemical burns. May cause an a

: Causes severe irritation which will progress to chemical burns. May cause an allergic skin reaction.

Symptoms/injuries after eye contact : Causes serious eye damage.

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Symptoms/injuries after ingestion : Harmful if swallowe

: Harmful if swallowed. May cause nausea, vomiting, and diarrhea. Gastrointestinal

irritation.

## 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention.

# **SECTION 5: Firefighting measures**

#### 5.1. Extinguishing Media

Suitable extinguishing media : Foam, dry chemical, carbon dioxide, water spray, fog.

Unsuitable extinguishing media : Do not use a heavy water stream. Use of heavy stream of water may spread fire.

#### 5.2. Special Hazards Arising From the Substance or Mixture

Fire hazard : Not considered flammable but may burn at high temperatures.

Explosion hazard : Product is not explosive.

Reactivity : Hazardous reactions will not occur under normal conditions.

5.3. Advice for firefighters

Precautionary measures fire : Exercise caution when fighting any chemical fire.

Firefighting instructions : Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory

protection.

Other information : Do not allow run-off from fire fighting to enter drains or water courses. Fire may

produce irritating and/or toxic gases.

# **SECTION 6: Accidental release measures**

# 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Do not get in eyes, on skin, or on clothing. Avoid breathing (vapor, mist, spray).

6.1.1. For non-emergency personnel

Protective equipment : Use appropriate personal protection equipment (PPE).

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters.

## 6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into

sewers or streams.

Methods for cleaning up : Clear up spills immediately and dispose of waste safely. Absorb and/or contain spill

with inert material, then place in suitable container. Do not take up in combustible material such as: saw dust or cellulosic material. Contact competent authorities

after a spill.

# 6.4. Reference to other sections

See heading 8, Exposure Controls and Personal Protection.

# **SECTION 7: Handling and storage**

#### 7.1. Precautions for safe handling

Additional hazards when processed : Avoid all eyes and skin contact and do not breathe vapour and mist. Under fire

conditions or contact with incompatibilities decomposition will produce toxic, and

corrosive gases.

Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. Wash

hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this

product.

# 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Store in a dry, cool and well-ventilated place. Keep container closed when not in

use. Keep/Store away from extremely high or low temperatures, ignition sources,

incompatible materials.

Incompatible products : Strong acids, strong bases, strong oxidizers, metals, aldehydes, ketones.

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#### 7.3. Specific end use(s)

Curing agent for Epoxy Resin. For professional use only.

# SECTION 8: Exposure controls/personal protection

# 8.1. Control parameters

Benzyl alcohol (100-51-6)				
Bulgaria	OEL TWA (mg/m³)	5.0 mg/m³		
Latvia	OEL TWA (mg/m³)	5 mg/m³		
Czech Republic	Expoziční limity (PEL) (mg/m3)	40 mg/m³		
Finland	HTP-arvo (8h) (mg/m3)	45 mg/m³		
Finland	HTP-arvo (8h) (ppm)	10 ppm		
Lithuania	IPRV (mg/m3)	5 mg/m³		
Poland	NDS (mg/m3)	240 mg/m³		
Triethanolamine (102-71-6)				
Austria	MAK (mg/m³)	10 mg/m³		
Austria	MAK (ppm)	0.8 ppm		
Austria	MAK Short time value (ppm)	1.6 ppm		
Belgium	Limit value (mg/m³)	5 mg/m³		
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m³)	5 mg/m³		
Spain	VLA-ED (mg/m³)	5 mg/m³		
Czech Republic	Expoziční limity (PEL) (mg/m3)	5 mg/m³		
Denmark	Grænseværdie (langvarig) (mg/m3)	3.1 mg/m³		
Denmark	Grænseværdie (langvarig) (ppm)	0.5 ppm		
Finland	HTP-arvo (8h) (mg/m3)	5 mg/m³		
Ireland	OEL (8 hours ref) (mg/m3)	5 mg/m³		
Lithuania	IPRV (mg/m3)	5 mg/m³		
Lithuania	TPRV (mg/m3)	10 mg/m³		
Sweden	nivågränsvärde (NVG) (mg/m3)	5 mg/m³		
Sweden	nivågränsvärde (NVG) (ppm)	0.8 ppm		
Sweden	kortidsvärde (KTV) (mg/m3)	10 mg/m³		
Sweden	kortidsvärde (KTV) (ppm)	1.6 ppm		
Portugal	OEL TWA (mg/m³)	5 mg/m³		

# 8.2. Exposure controls

Appropriate engineering controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal protective equipment

: Protective goggles. Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection.



Materials for protective clothing

Hand protection
Eye protection

Skin and body protection Respiratory protection

: Chemically resistant materials and fabrics.

: Wear chemically resistant protective gloves.

: Chemical goggles or safety glasses.

: Wear suitable protective clothing.

: In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other information : When using, do not eat, drink or smoke.

# **SECTION 9: Physical and chemical properties**

# 9.1. Information on basic physical and chemical properties

Physical state : Liquid

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: Clear to light yellow. **Appearance** Colour : No data available Odour No data available Odour threshold No data available : No data available рН Relative evaporation rate (butylacetate=1) No data available Melting point : No data available : No data available Freezing point **Boiling point** : No data available Flash point : No data available No data available Self ignition temperature Decomposition temperature : No data available : No data available Flammability (solid, gas) Vapour pressure No data available Relative vapour density at 20 °C : No data available

Relative density : 0.98

Solubility : No data available Log Pow : No data available : No data available Log Kow : No data available Viscosity, kinematic Viscosity, dynamic : No data available **Explosive properties** No data available Oxidising properties : No data available **Explosive limits** : Not applicable

#### 9.2. Other information

No additional information available

# SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Hazardous reactions will not occur under normal conditions.

#### 10.2. Chemical stability

The product is stable at normal handling and storage conditions.

#### 10.3. Possibility of hazardous reactions

Strong acids, bases, amines, or mercaptans may cause polymerization.

# 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Incompatible materials. Ignition sources.

# 10.5. Incompatible materials

Strong oxidizing agents, strong acids, strong bases, metals, aldehydes, ketones, halogenated compounds.

## 10.6. Hazardous decomposition products

Carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides, smoke, may release flammable gases, hydrogen, hydrogen cyanide, toxic gases, ammonia, nitric acid, benzaldehyde, sulfur oxides.

# **SECTION 11: Toxicological information**

# 11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

1-(2-Aminoethyl) piperazine (140-31-8)	
LD50 oral rat	2140 mg/kg
LD50 dermal rabbit	880 μl/kg

Trimethylhexamethylenediamine (25620-58-0)	
LD50 oral rat 910 mg/kg	
Isophorone diamine (2855-13-2)	
LD50 oral rat 1030 mg/kg	

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4,7-Methano-1H-indenedimethanamine, octahydro- (68889-71-4)			
ATE (oral)	500.000 mg/kg bodyweight		
ATE (dermal)	300.000 mg/kg bodyweight		
Benzyl alcohol (100-51-6)			
LD50 oral rat	1230 mg/kg		
LD50 dermal rat	1700 mg/kg		
LD50 dermal rabbit	2000 mg/kg		
LC50 inhalation rat (mg/l)	8.8 mg/l (Exposure time: 4 h)		
Triethanolamine (102-71-6)	Triethanolamine (102-71-6)		
LD50 oral rat	4190 mg/kg		
1,3-Cyclohexanedimethanamine (2579-2	1,3-Cyclohexanedimethanamine (2579-20-6)		
ATE (oral)	500.000 mg/kg bodyweight		
ATE (dermal)	1100.000 mg/kg bodyweight		
4-Nonylphenol, branched (84852-15-3)			
LD50 oral rat	580 mg/kg		
LD50 dermal rabbit	2031 mg/kg		

Skin corrosion/irritation

Serious eye damage/irritation

Respiratory or skin sensitisation

Germ cell mutagenicity

Carcinogenicity

Reproductive toxicity

Specific target organ toxicity (single exposure)

Specific target organ toxicity (repeated exposure)

Aspiration hazard

: Causes severe skin burns and eye damage.

: Causes serious eye damage.

: May cause allergy or asthma symptoms or breathing difficulties if

inhaled. May cause an allergic skin reaction.

: Not classified. Based on available data, the classification criteria are not

met

: Not classified. Based on available data, the classification criteria are not

met

: Suspected of damaging fertility or the unborn child.

: Not classified. Based on available data, the classification criteria are not

met

: Not classified. Based on available data, the classification criteria are not

met

: Not classified. Based on available data, the classification criteria are not

met

# SECTION 12: Ecological information

## 12.1. Toxicity

Ecology - general : Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

1-(2-Aminoethyl) piperazine (140-31-8)		
LC50 fishes 1	1950 - 2460 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])	
EC50 Daphnia 1	32 mg/l (Exposure time: 48 h - Species: Daphnia magna)	
EC50 other aquatic organisms 1	495 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata)	
LC50 fish 2	> 1000 mg/l (Exposure time: 96 h - Species: Poecilia reticulata [semi-static])	
Trimethylhexamethylenediamine (25620-58-0)		
LC50 fishes 1	172 mg/l (Exposure time: 48 h - Species: Leuciscus idus [static])	
EC50 Daphnia 1 31.5 mg/l (Exposure time: 24 h - Species: Daphnia magna)		
EC50 other aquatic organisms 1	29.5 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus)	

Isophorone diamine (2855-13-2)	
LC50 fishes 1	110 mg/l (Exposure time: 96 h - Species: Leuciscus idus [semi-static])
EC50 Daphnia 1	42 mg/l (Exposure time: 24 h - Species: Daphnia magna)
EC50 other aquatic organisms 1	37 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus)

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Isophorone diamine (2855-13-2)			
EC50 Daphnia 2	250 Daphnia 2 14.6 - 21.5 mg/l (Exposure time: 48 h - Species: Daphnia magna [semi-static])		
Benzyl alcohol (100-51-6)			
LC50 fishes 1	460 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])		
EC50 Daphnia 1	23 mg/l (Exposure time: 48 h - Species: water flea)		
EC50 other aquatic organisms 1	35 mg/l (Exposure time: 3 h - Species: Anabaena variabilis)		
LC50 fish 2	10 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])		
Triethanolamine (102-71-6)			
LC50 fishes 1	10600 (10600 - 13000) mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])		
EC50 Daphnia 1	1386 mg/l (Exposure time: 24 h - Species: Daphnia magna)		
EC50 other aquatic organisms 1	216 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus)		
LC50 fish 2	1000 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])		
EC50 other aquatic organisms 2	169 mg/l (Exposure time: 96 h - Species: Desmodesmus subspicatus)		
4-Nonylphenol, branched (84852-15-	3)		
LC50 fishes 1	0.135 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])		
EC50 Daphnia 1	0.14 mg/l (Exposure time: 48 h - Species: Daphnia magna)		
EC50 other aquatic organisms 1	0.36 - 0.48 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata [static])		
LC50 fish 2	0.1351 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])		
EC50 other aquatic organisms 2	0.16 - 0.72 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata [static])		

#### Persistence and degradability 12.2.

Super Sap® CLV Hardener	
Persistence and degradability	May cause long-term adverse effects in the environment.

#### 12.3. **Bioaccumulative potential**

Super Sap® CLV Hardener		
Bioaccumulative potential	Not established.	
1-(2-Aminoethyl) piperazine (140-31-8)		
BCF fish 1	(no bioaccumulation expected)	
Log Pow	-1.48	
Trimethylhexamethylenediamine (25620-58-0)		
Log Pow	0.77 (at 23 °C)	
Isophorone diamine (2855-13-2)		
Log Pow	0.79 (at 23 °C)	
Benzyl alcohol (100-51-6)		
Log Pow	1.1	
Triethanolamine (102-71-6)		
BCF fish 1	3.9	
Log Pow	-2.53	
4-Nonylphenol, branched (84852-15-3)		
BCF fish 1	271	

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

4-Nonylphenol, branched (84852-15-3)	
This substance/mixture meets the PBT criteria of REACH, annex XIII.	

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#### 4-Nonylphenol, branched (84852-15-3)

This substance/mixture meets the vPvB criteria of REACH, annex XIII.

## 12.6. Other adverse effects

Other information : Avoid release to the environment.

# **SECTION 13: Disposal considerations**

## 13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

# **SECTION 14: Transport information**

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number

UN-No : 2735

14.2. UN proper shipping name

Proper Shipping Name : AMINES, LIQUID, CORROSIVE, N.O.S.

Transport document description : UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (1,3-Cyclohexanedimethanamine), 8,

II, (E)

14.3. Transport hazard class(es)

Class (UN) : 8 Hazard labels (UN) : 8



14.4. Packing group

Packing group (UN) : I

14.5. Environmental hazards

Dangerous for the environment



Other information : No supplementary information available.

: 80

14.6. Special precautions for user

14.6.1. Overland transport

Hazard identification number (Kemler

No.)

Classification code (UN) : C7

Orange plates :



14.6.2. Transport by Sea

MFAG-No : 153

14.6.3. Air Transport

No additional information available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

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# **SECTION 15: Regulatory information**

# 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture 15.1.1. EU-Regulations

Authorisations and/or restrictions on use (Annex XVII):

3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008

Super Sap® CLV Hardener - 1-(2-Aminoethyl) piperazine - Trimethylhexamethylenediamine - Isophorone diamine - 4,7-Methano-1H-indenedimethanamine, octahydro- - Benzyl alcohol - 1,3-Cyclohexanedimethanamine - 4-Nonylphenol, branched

Contains REACH Candidate List substance(s): 4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof] (EC 284-325-5, CAS 84852-15-3)

## 15.1.2. National regulations

No additional information available

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

# **SECTION 16: Other information**

Revision date : 30/09/2013

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE

COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and

1999/45/EC, and amending Regulation (EC) No 1907/2006.

#### Full text of R-, H- and EUH-phrases::

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — AcuteHazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Repr. 2	Reproductive toxicity, Category 2
Repr. 2	Reproductive toxicity, Category 2
Resp. Sens. 1	Sensitisation — Respiratory, category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Corr. 1C	Skin corrosion/irritation, Category 1C
Skin Sens. 1	Sensitisation — Skin, category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H302	Harmful if swallowed
H311	Toxic in contact with skin
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
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H361	Suspected of damaging fertility or the unborn child

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H361f	Suspected of damaging fertility
H400	Very toxic 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
R20/22	Harmful by inhalation and if swallowed
R21/22	Harmful in contact with skin and if swallowed
R22	Harmful if swallowed
R24	Toxic in contact with skin
R34	Causes burns
R35	Causes severe burns
R37	Irritating to respiratory system
R41	Risk of serious damage to eyes
R42	May cause sensitization by inhalation
R43	May cause sensitisation by skin contact
R50	Very toxic to aquatic organisms
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
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
R63	Possible risk of harm to the unborn child
С	Corrosive
N	Dangerous for the environment
Т	Toxic
Xi	Irritant
Xn	Harmful

SDS EU (REACH Annex II) 10pt

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

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