

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 27.09.2017

version n° 7

Revision: 27.09.2017

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

- **1.1 Product identifier**
- **Trade name:** SUPERFLEX ECO PARTE A
- **Article number:** B0038.020, 04769.020
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the preparation:** Adhesives
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
KERAKOLL S.p.A.  
Via dell'Artigianato, 9  
41049 Sassuolo (MODENA) ITALY  
Tel. +39 0536 816511 Fax. +39 0536 816581  
info@kerakoll.com
- **E-mail address of the competent person responsible for the SDS:** safety@kerakoll.com
- **Informing department:** Product safety department
- **1.4 Emergency telephone number:**  
+441527578000 (Kerakoll UK)  
+39-0536-816511 (Kerakoll Italy)

## SECTION 2: Hazards identification

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



GHS07

- |                   |   |
|-------------------|---|
| Skin Irrit. 2     | H315 Causes skin irritation.                            |
| Eye Irrit. 2      | H319 Causes serious eye irritation.                     |
| Skin Sens. 1      | H317 May cause an allergic skin reaction.               |
| .....             |   |
| Aquatic Chronic 3 | H412 Harmful to aquatic life with long lasting effects. |

- **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**



GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**  
reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)  
C12-C14 Glicidil-ether aliphatic
- **Hazard statements**  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H317 May cause an allergic skin reaction.  
H412 Harmful to aquatic life with long lasting effects.
- **Precautionary statements**  
P260 Do not breathe vapours.

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- P280 Wear protective gloves / eye protection.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**- Additional information:**

EUH205 Contains epoxy constituents. May produce an allergic reaction.

**- 2.3 Other hazards****- Results of PBT and vPvB assessment****- PBT:** Not applicable.**- vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

**- 3.2 Mixtures****- Description:**

Adhesive.

Mixture consisting of the following components.

**- Dangerous components:**

CAS: 25068-38-6 NLP: 500-033-5 Index number: 603-074-00-8 Reg.nr.: 01-2119456619-26-XXXX	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700) ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	5-9.9%
CAS: 108-32-7 EINECS: 203-572-1 Index number: 607-194-00-1 Reg.nr.: 01-2119537232-48-XXXX	propylene carbonate ⚠ Eye Irrit. 2, H319	2.5-4.9%
CAS: 68609-97-2 EINECS: 271-846-8 Index number: 603-103-00-4 Reg.nr.: 01-21194852289-22-XXXX	C12-C14 Glicidil-ether aliphatic ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317	<2.5%
CAS: 25154-52-3 EINECS: 246-672-0 Index number: 601-053-00-8 Reg.nr.: 01-2119510715-45-XXXX	nonylphenol ⚠ Repr. 2, H361fd; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400 (M=10); Aquatic Chronic 1, H410 (M=10); ⚠ Acute Tox. 4, H302	<0.1%

**- Additional information** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

**- 4.1 Description of first aid measures****- General information** Take affected persons into the open air.**- After inhalation** In case of unconsciousness bring patient into stable side position for transport.**- After skin contact**

If skin irritation continues, consult a doctor.

Instantly wash with water and soap and rinse thoroughly.

**- After eye contact**

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

**- After swallowing** In case of persistent symptoms consult doctor.**- 4.2 Most important symptoms and effects, both acute and delayed**

Allergic reactions

Sickness

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- 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  
 Use fire fighting measures that suit the environment.
- **5.2 Special hazards arising from the substance or mixture**  
 Formation of toxic gases is possible during heating or in case of fire.  
 Can be released in case of fire  
 Carbon monoxide (CO)  
 Formation of poisonous gases during heating or in fires.
- **5.3 Advice for firefighters**
- **Protective equipment:**  
 Do not inhale explosion gases or combustion gases.  
 Put on breathing apparatus.
- **Additional information**  
 Cool endangered containers with water spray jet.  
 Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.  
 Collect contaminated fire fighting water separately. It must not enter drains.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
 Ensure adequate ventilation  
 Keep away from ignition sources  
 Use breathing protection against the effects of fumes/dust/aerosol.  
 Put on breathing apparatus.
- **6.2 Environmental precautions:**  
 Inform respective authorities in case product reaches water or sewage system.  
 Do not allow to enter drainage system, 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).  
 Dispose of contaminated material as waste according to item 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 information on disposal.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
 Use only in well ventilated areas.  
 Keep away from heat and direct sunlight.  
 Store in cool, dry place in tightly closed containers.  
 Ensure good ventilation/exhaustion at the workplace.  
 Prevent formation of aerosols.
- **Information about protection against explosions and fires:** Keep breathing equipment ready.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**  
 Store only in unopened original containers.

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- **Information about storage in one common storage facility:**  
Store away from foodstuffs.  
Store away from oxidising agents.
- **Further information about storage conditions:**  
Protect from frost.  
Store container in a well ventilated position.  
Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**  
Do not eat, drink or smoke while working.  
Apply solvent resistant clothing before beginning work.  
Take off immediately all contaminated clothing  
Wash hands during breaks and at the end of the work.  
Do not inhale gases / fumes / aerosols.  
Avoid contact with the eyes and skin.
- **Breathing equipment:**  
Breathing protection recommended.  
Filter A/P2.
- **Protection of hands:**  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation  
Protective gloves.
- **Material of gloves**  
PVC gloves  
Rubber gloves
- **Eye protection:** Tightly sealed safety glasses.
- **Body protection:** Protective work clothing.

## SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Pasty
Colour:	Light grey
- **Odour:** Light
- **Odour threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**

Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	322 °C
- **Flash point:** 110 °C

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- <b>Inflammability (solid, gaseous)</b>	Not applicable.
- <b>Ignition temperature:</b>	
<b>Decomposition temperature:</b>	Not determined.
- <b>Self-inflammability:</b>	Product is not selfigniting.
- <b>Explosive properties:</b>	Product is not explosive.
- <b>Critical values for explosion:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
- <b>Vapour pressure:</b>	Not determined.
- <b>Density at 20 °C</b>	1.46 g/cm <sup>3</sup>
- <b>Relative density</b>	Not determined.
- <b>Vapour density</b>	Not determined.
- <b>Evaporation rate</b>	Not determined.
- <b>Solubility in / Miscibility with Water:</b>	Soluble
- <b>Partition coefficient: n-octanol/water:</b>	Not determined.
- <b>Viscosity:</b>	
<b>dynamic:</b>	Not determined.
<b>kinematic:</b>	Not determined.
<b>Organic solvents:</b>	4.2 %
- <b>9.2 Other information</b>	No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** Reacts with strong oxidizing agents
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**  
Irritant gases/vapours  
Carbon monoxide and carbon dioxide

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

- **LD/LC50 values that are relevant for classification:**

**ATE (Acute Toxicity Estimates)**

Inhalative	LC50/4 h	>611 mg/l (mouse)
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**25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)**

Oral	LD50	15,000 mg/kg (mouse)
Dermal	LD50	23,000 mg/kg (RAB)

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- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes skin irritation.
- **Serious eye damage/irritation**  
Causes serious eye irritation.
- **Respiratory or skin sensitisation**  
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### - 12.1 Toxicity

#### - Aquatic toxicity:

**25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)**

CL50 96h	1.5 mg/L (Fish)
CE50 48h	1.8 mg/L (Daphnia)
CEr50 96h	40 mg/L (Alghe/piante acquatiche)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **General notes:**  
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.  
Do not allow product to reach ground water, water bodies or sewage system.  
Danger to drinking water if even small quantities leak into soil.  
Harmful to aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

## SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must be specially treated under adherence to official regulations.  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:**  
Dispose of packaging according to regulations on the disposal of packagings.  
Packagings that cannot be cleaned are to be disposed of in the same manner as the product.

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### SECTION 14: Transport information

- 14.1 UN-Number	The product is not dangerous according to ADR, ADN, IMDG, IATA.
- ADR, ADN, IMDG, IATA	Void
- 14.2 UN proper shipping name	
- ADR, ADN, IMDG, IATA	Void
- 14.3 Transport hazard class(es)	
- ADR, ADN, IMDG, IATA	
- Class	Void
- 14.4 Packing group	
- ADR, IMDG, IATA	Void
- 14.5 Environmental hazards:	
- Marine pollutant:	No
- 14.6 Special precautions for user	Not applicable.
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
- UN "Model Regulation":	Void

### SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 46a
- National regulations  
The product is subject to classification in accordance with the prevailing version of the regulations on hazardous materials.
- Additional classification according to Decree on Hazardous Materials, Annex II: -
- Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

- Relevant phrases
  - H302 Harmful if swallowed.
  - H314 Causes severe skin burns and eye damage.
  - H315 Causes skin irritation.
  - H317 May cause an allergic skin reaction.
  - H319 Causes serious eye irritation.
  - H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
  - 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.
- Department issuing data specification sheet: SCP
- Contact: Dr. B. Brina c/o Kerakoll S.p.A. tel. +39-0536-816511 fax +39-0536-816581
- Others regulations  
The safety data sheet has been drawn up in accordance with European directives 1999/45/EC, 2001/58/EC, 2001/59/EC and 2001/60/EC.

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**- Abbreviations and acronyms:**

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

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

Repr. 2: Reproductive toxicity – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

**- \* Data compared to the previous version altered.**

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

- **1.1 Product identifier**
- **Trade name:** *SUPERFLEX ECO PARTE B*
- **Article number:** B0277.021, 12444.021
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the preparation:**  
Quenchant  
Epoxy curing agent
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
KERAKOLL S.p.A.  
Via dell'Artigianato, 9  
41049 Sassuolo (MODENA) ITALY  
Tel. +39 0536 816511 Fax. +39 0536 816581  
info@kerakoll.com
- **E-mail address of the competent person responsible for the SDS:** safety@kerakoll.com
- **Informing department:** Product safety department
- **1.4 Emergency telephone number:**  
+441527578000 (Kerakoll UK)  
+39-0536-816511 (Kerakoll Italy)

## SECTION 2: Hazards identification

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



GHS05 corrosion

Skin Corr. 1C      H314 Causes severe skin burns and eye damage.  
Eye Dam. 1      H318 Causes serious eye damage.



GHS07

Skin Sens. 1      H317 May cause an allergic skin reaction.  
Aquatic Chronic 3      H412 Harmful to aquatic life with long lasting effects.

- **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**



GHS05 GHS07

- **Signal word** Danger
- **Hazard-determining components of labelling:**  
2,4,6-tris(dimethylaminomethyl)phenol  
3-aminomethyl-3,5,5-trimethylcyclohexylamine  
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and tetraethylenepentamine

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m-phenylenebis(methylamine)  
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine  
3,6,9,12-tetra-azatetradecamethylenediamine  
Tetraethylenepentamine, linear, cyclic and branched  
Polietilenpoliammine, frazione trietilentetrammina

**- Hazard statements**

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

**- Precautionary statements**

P260 Do not breathe vapours.  
P280 Wear protective gloves / eye protection.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**- 2.3 Other hazards**

The product evidently does not contain any organically bonded halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

**- Results of PBT and vPvB assessment**

- **PBT:** Not applicable.  
- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

**- 3.2 Mixtures**

- **Description:** Mixture consisting of the following components.

**- Dangerous components:**

CAS: 100-51-6 EINECS: 202-859-9 Index number: 603-057-00-5 Reg.nr.: 01-2119492630-38-XXXX	Benzyl alcohol ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	10-19.9%
CAS: 90-72-2 EINECS: 202-013-9	2,4,6-tris(dimethylaminomethyl)phenol ⚠ Skin Corr. 1C, H314; Eye Dam. 1, H318; ⚠ Skin Sens. 1B, H317	2.5-4.9%
CAS: 2855-13-2 EINECS: 220-666-8 Index number: 612-067-00-9 Reg.nr.: 01-2119514687-32-XXXX	3-aminomethyl-3,5,5-trimethylcyclohexylamine ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	2.5-4.9%
CAS: 103758-98-1 NLP: 500-289-8	Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and tetraethylenepentamine ⚠ Eye Dam. 1, H318; ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317	1-2.99%
CAS: 68082-29-1 NLP: 500-191-5	Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine ⚠ Eye Dam. 1, H318; ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317	1-2.99%
CAS: 1477-55-0 EINECS: 216-032-5 Reg.nr.: 01-2119480150-50-XXXX	m-phenylenebis(methylamine) ⚠ Skin Corr. 1A, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Sens. 1, H317; Aquatic Chronic 3, H412	<2.5%

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**Trade name: SUPERFLEX ECO PARTE B**

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CAS: 61788-44-1	Styrenated phenol ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	<2.5%
CAS: 4067-16-7 EINECS: 223-775-9 Index number: 612-064-00-2 Reg.nr.: 01-2119485826-22-XXXX	3,6,9,12-tetra-azatetradecamethylenediamine ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Skin Sens. 1, H317	<1%
CAS: 90640-66-7 EINECS: 292-587-7 Reg.nr.: 01-2119487290-37-XXXX	Tetraethylenepentamine, linear, cyclic and branched ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Chronic 2, H411; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317	<1%
CAS: 90640-67-8 EINECS: 292-588-2 Reg.nr.: 01-2119487919-13-0000	Polietilenpoliammine, frazione trietilentetrammina ⚠ Skin Corr. 1B, H314; Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	<0.5%

- **Additional information** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

#### - 4.1 Description of first aid measures

- **General information** Take affected persons into the open air.
- **After inhalation** In case of unconsciousness bring patient into stable side position for transport.
- **After skin contact**  
If skin irritation continues, consult a doctor.  
Instantly wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water. Then consult doctor.
- **After swallowing** In case of persistent symptoms consult doctor.

#### - 4.2 Most important symptoms and effects, both acute and delayed

Allergic reactions  
Sickness

#### - 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** Use fire fighting measures that suit the environment.

#### - 5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

Can be released in case of fire

Nitrogen oxides (NO<sub>x</sub>)

Carbon monoxide (CO)

Formation of poisonous gases during heating or in fires.

#### - 5.3 Advice for firefighters

##### - Protective equipment:

Do not inhale explosion gases or combustion gases.

Put on breathing apparatus.

##### - Additional information

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Collect contaminated fire fighting water separately. It must not enter drains.

### SECTION 6: Accidental release measures

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

Ensure adequate ventilation

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Use breathing protection against the effects of fumes/dust/aerosol.

Keep away from ignition sources

Wear protective clothing.

Put on breathing apparatus.

Wear protective equipment. Keep unprotected persons away.

**- 6.2 Environmental precautions:**

Keep dirty washing water for appropriate disposal.

Inform respective authorities in case product reaches water or sewage system.

Do not allow to enter drainage system, 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 neutralising agent.

Dispose of contaminated material as waste according to item 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 information on disposal.

**SECTION 7: Handling and storage**

**- 7.1 Precautions for safe handling**

Store in cool, dry place in tightly closed containers.

Keep away from heat and direct sunlight.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

**- Information about protection against explosions and fires:** Keep breathing equipment ready.

**- 7.2 Conditions for safe storage, including any incompatibilities**

**- Storage**

**- Requirements to be met by storerooms and containers:**

Store only in unopened original containers.

**- Information about storage in one common storage facility:** Store away from foodstuffs.

**- Further information about storage conditions:**

Protect from frost.

Store container in a well ventilated position.

Keep container tightly sealed.

**- 7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

**- Additional information about design of technical systems:** No further data; see item 7.

**- 8.1 Control parameters**

**- Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**- Additional information:** The lists that were valid during the compilation were used as basis.

**- 8.2 Exposure controls**

**- Personal protective equipment**

**- General protective and hygienic measures**

Do not eat, drink or smoke while working.

Apply solvent resistant clothing before beginning work.

Take off immediately all contaminated clothing

Wash hands during breaks and at the end of the work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

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- **Breathing equipment:**  
Not necessary if room is well-ventilated.  
Filter A/P2.
- **Protection of hands:**  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation  
Protective gloves.
- **Material of gloves**  
Rubber gloves  
PVC gloves  
PVA gloves
- **Eye protection:** Tightly sealed safety glasses.
- **Body protection:** Protective work clothing.

## SECTION 9: Physical and chemical properties

### - 9.1 Information on basic physical and chemical properties

#### - General Information

#### - Appearance:

Form: Fluid  
Colour: Light yellow

- Odour: Amine-like

- Odour threshold: Not determined.

- pH-value at 20 °C: 11

#### - Change in condition

Melting point/freezing point: Not determined  
Initial boiling point and boiling range: 200 °C

- Flash point: 130 °C

- Inflammability (solid, gaseous) Not applicable.

- Ignition temperature: 435 °C

- Decomposition temperature: Not determined.

- Self-inflammability: Product is not selfigniting.

- Explosive properties: Product is not explosive.

#### - Critical values for explosion:

Lower: 1.3 Vol %  
Upper: 13 Vol %

- Vapour pressure at 20 °C: 0.1 hPa

- Density at 20 °C 1.78 g/cm<sup>3</sup>

- Relative density Not determined.

- Vapour density Not determined.

- Evaporation rate Not determined.

#### - Solubility in / Miscibility with

Water: Soluble

- Partition coefficient: n-octanol/water: Not determined.

#### - Viscosity:

dynamic: Not determined.

kinematic: Not determined.

Organic solvents: 11.3 %

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- **9.2 Other information** No further relevant information available.

## SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** Develops corrosive gases / fumes
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**  
Corrosive gases/vapours  
Carbon monoxide and carbon dioxide

## SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

- **LD/LC50 values that are relevant for classification:**

### ATE (Acute Toxicity Estimates)

Oral	LD50	7,234 mg/kg
Dermal	LD50	17,727 mg/kg (rbt)
Inhalative	LC50/4 h	>31.6 mg/l

### 4067-16-7 3,6,9,12-tetra-azatetradecamethylenediamine

Oral	LD50	1,600 mg/kg (mouse)
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- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**  
Causes serious eye damage.
- **Respiratory or skin sensitisation**  
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish

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**- General notes:**

Water danger class 3 (German Regulation) (Self-assessment): extremely hazardous for water.  
Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

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

Danger to drinking water if even extremely small quantities leak into soil.

Harmful to aquatic organisms

**- 12.5 Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

**- 13.1 Waste treatment methods****- Recommendation**

Must be specially treated under adherence to official regulations.

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

**- Uncleaned packagings:****- Recommendation:**

Dispose of packaging according to regulations on the disposal of packagings.

Packagings that cannot be cleaned are to be disposed of in the same manner as the product.

### SECTION 14: Transport information

**- 14.1 UN-Number****- ADR, IMDG, IATA**

UN2735

**- 14.2 UN proper shipping name****- ADR**

UN2735 AMINES, LIQUID, CORROSIVE, N.O.S.  
(Polietilenpoliammine, frazione trietilentetrammina, 3-aminomethyl-3,5,5-trimethylcyclohexylamine)

**- IMDG, IATA**

AMINES, LIQUID, CORROSIVE, N.O.S.  
(Polietilenpoliammine, frazione trietilentetrammina, 3-aminomethyl-3,5,5-trimethylcyclohexylamine)

**- 14.3 Transport hazard class(es)****- ADR, IMDG, IATA****- Class**

8 Corrosive substances.

**- Label**

8

**- 14.4 Packing group****- ADR, IMDG, IATA**

III

**- 14.5 Environmental hazards:****- Marine pollutant:**

No

**- 14.6 Special precautions for user**

Warning: Corrosive substances.

**- Kemler Number:**

80

**- EMS Number:**

F-A,S-B

**- Segregation groups**

Alkalis

**- Stowage Category**

A

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- Segregation Code	SG35 Stow "separated from" acids.
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
<b>- Transport/Additional information:</b>	
<b>- ADR</b>	
- Limited quantities (LQ)	5L
- Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
- Transport category	3
- Tunnel restriction code	E
<b>- IMDG</b>	
- Limited quantities (LQ)	5L
- Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
- UN "Model Regulation":	UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (POLIETILENPOLIAMMINE, FRAZIONE TRIETILENTETRAMMINA, 3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE), 8, III

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **National regulations**  
The product is subject to classification in accordance with the prevailing version of the regulations on hazardous materials.
- **Additional classification according to Decree on Hazardous Materials, Annex II:** -
- **Water hazard class:** Water danger class 3 (Self-assessment): extremely hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

- **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.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
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.

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H412 Harmful to aquatic life with long lasting effects.

- **Department issuing data specification sheet:** SCP

- **Contact:** Dr. B. Brina c/o Kerakoll S.p.A. tel. +39-0536-816511 fax +39-0536-816581

- **Others regulations**

The safety data sheet has been drawn up in accordance with European directives 1999/45/EC, 2001/58/EC, 2001/59/EC and 2001/60/EC.

- **Abbreviations and acronyms:**

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

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

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 Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

Skin Sens. 1B: Skin sensitisation – Category 1B

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

- \* **Data compared to the previous version altered.**

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