

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

Printing date 13.05.2020

V- 3.0

Revision: 06.05.2020

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

**1.1 Product identifier**

**Trade name: RADEX UNI+ putty**

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

Identified uses: professional use.

**Application of the substance / the mixture** Knife filler/ Surfacer

**1.3 Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:**

RADEX-Europe Ltd.

Uriekstes iela 3, Riga

LV-1005, Latvia

Tel: +371 67387778

Fax: +371 67387789

info@radex-europe.lv

**Further information obtainable from:** info@radex-europe.lv

**1.4 Emergency telephone number:** Tel: +371 67387778 (9:00 – 18:00)

**\* SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008**



GHS02

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08

Repr. 2 H361d Suspected of damaging the unborn child.

STOT RE 1 H372 Causes damage to the hearing organs through prolonged or repeated exposure.



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.

**2.2 Label elements**

**Labelling according to Regulation (EC) No 1272/2008**

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

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**Hazard pictograms**

GHS02 GHS07 GHS08

**Signal word** Danger**Hazard-determining components of labelling:**

styrene  
 maleic anhydride  
 cobalt(II) 2-ethylhexanoate  
 N,N'-ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide)

**Hazard statements**

H226 Flammable liquid and vapour.  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H317 May cause an allergic skin reaction.  
 H361d Suspected of damaging the unborn child.  
 H372 Causes damage to the hearing organs through prolonged or repeated exposure.

**Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.  
 No smoking.  
 P260 Do not breathe mist/vapours/spray.  
 P271 Use only outdoors or in a well-ventilated area.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**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:** Mixture of substances listed below with nonhazardous additions.**Dangerous components:**

CAS: 100-42-5 EINECS: 202-851-5 Reg.nr.: 01-2119457861-32	styrene 	10-<20%
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CAS: 123-26-2 EINECS: 204-613-6 Reg.nr.: 01-2119978265-26	N,N'-ethane-1,2-diylbis(12-hydroxyoctadecan-1- amide) ⚠ Skin Sens. 1B, H317; Aquatic Chronic 3, H412	0.1-<1%
CAS: 136-52-7 EINECS: 205-250-6 Reg.nr.: 01-2119524678-29	cobalt(II) 2-ethylhexanoate ⚠ Repr. 2, H361f; ⚠ Aquatic Acute 1, H400; ⚠ Eye Irrit. 2, H319; Skin Sens. 1A, H317; Aquatic Chronic 3, H412	0.1-<1%
CAS: 141-78-6 EINECS: 205-500-4 Reg.nr.: 01-2119475103-46	ethyl acetate ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	0.1-<1%
CAS: 108-31-6 EINECS: 203-571-6 Reg.nr.: 01-2119472428-31	maleic anhydride ⚠ Resp. Sens. 1, H334; STOT RE 1, H372; ⚠ Skin Corr. 1B, H314; Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302; Skin Sens. 1A, H317 Specific concentration limit: Skin Sens. 1A; H317: C ≥ 0.001 %	0.001-0.1%

**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:

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

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

Take affected persons out of danger area and lay down.

#### 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.

#### After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

#### After eye contact:

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

**After swallowing:** Do not induce vomiting; call for medical help 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:

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**For safety reasons unsuitable extinguishing agents:** Water with full jet

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**5.2 Special hazards arising from the substance or mixture**

Can form explosive gas-air mixtures.

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

**5.3 Advice for firefighters****Protective equipment:**

Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

**Additional information**

Cool endangered receptacles with water spray.

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

Collect contaminated fire fighting water separately. It must not enter the sewage system.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources.

Avoid contact with the eyes and skin.

**6.2 Environmental precautions:** 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).

Do not flush with water or aqueous cleansing agents.

Dispose of the material collected according to regulations.

**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.

Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Do not eat, drink, smoke or sniff while working.

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

**Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Keep respiratory protective device available.

Fumes can combine with air to form an explosive mixture.

**7.2 Conditions for safe storage, including any incompatibilities****Storage:****Requirements to be met by storerooms and receptacles:**

Store only in the original receptacle.

**Information about storage in one common storage facility:**

Store away from foodstuffs.

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Store away from oxidising agents.

**Further information about storage conditions:**

Store in cool, dry conditions in well sealed receptacles.

Store receptacle in a well ventilated area.

**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:****100-42-5 styrene**

WEL (Great Britain)	Short-term value: 1080 mg/m <sup>3</sup> , 250 ppm Long-term value: 430 mg/m <sup>3</sup> , 100 ppm
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**136-52-7 cobalt(II) 2-ethylhexanoate**

WEL (Great Britain)	Long-term value: 0.1 mg/m <sup>3</sup> as Co; Carc, Sen
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**141-78-6 ethyl acetate**

WEL (Great Britain)	Short-term value: 1468 mg/m <sup>3</sup> , 400 ppm Long-term value: 734 mg/m <sup>3</sup> , 200 ppm
IOELV (EU)	Short-term value: 1468 mg/m <sup>3</sup> , 400 ppm Long-term value: 734 mg/m <sup>3</sup> , 200 ppm

**108-31-6 maleic anhydride**

WEL (Great Britain)	Short-term value: 3 mg/m <sup>3</sup> Long-term value: 1 mg/m <sup>3</sup> Sen
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**Regulatory information**

WEL (Great Britain): EH40/2020

IOELV (EU): (EU) 2019/1831

**DNELs****100-42-5 styrene**

Dermal	DNEL	406 mg/kg bw/day (long-term - systemic effects, workers)
Inhalative	DNEL	289 mg/m <sup>3</sup> (acute - systemic effects, workers) 306 mg/m <sup>3</sup> (acute - local effects, workers) 85 mg/m <sup>3</sup> (long-term - systemic effects, workers)

**123-26-2 N,N'-ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide)**

Inhalative	DNEL	3.35 mg/m <sup>3</sup> (long-term - local effects, workers)
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**141-78-6 ethyl acetate**

Dermal	DNEL	63 mg/kg bw/day (long-term - systemic effects, workers)
Inhalative	DNEL	1,468 mg/m <sup>3</sup> (acute - systemic effects, workers) 1,468 mg/m <sup>3</sup> (acute - local effects, workers) 734 mg/m <sup>3</sup> (long-term - systemic effects, workers) 734 mg/m <sup>3</sup> (long-term - local effects, workers)

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<b>PNECs</b>	
<b>100-42-5 styrene</b>	
PNEC	0.028 mg/l (freshwater environment) 0.0028 mg/l (marine environment) 0.04 mg/l (intermittent releases) 5 mg/l (sewage treatment plants)
PNEC	0.614 mg/kg (freshwater sediment environment) 0.0614 mg/kg (marine sediment environment) 0.2 mg/kg (soil)
<b>123-26-2 N,N'-ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide)</b>	
PNEC	100 µg/l (sewage treatment plants)
<b>141-78-6 ethyl acetate</b>	
PNEC	0.24 mg/l (freshwater environment) 0.024 mg/l (marine environment) 1.65 mg/l (intermittent releases) 650 mg/l (sewage treatment plants)
PNEC	1.15 mg/kg (freshwater sediment environment) 0.115 mg/kg (marine sediment environment)

**Additional information:** The lists valid during the making were used as basis.

**8.2 Exposure controls****Personal protective equipment:****General protective and hygienic measures:**

Ensure good ventilation/exhaustion at the workplace.

Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

Keep ignition sources away - Do not smoke.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Do not eat or drink while working.

**Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Filter A2/P2

**Protection of hands:**

Protective gloves

Check the permeability prior to each renewed use of the glove.

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 (EN 374).

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**Material of gloves**

Fluorocarbon rubber (Viton)

Recommended thickness of the material:  $\geq 0,7$  mm

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.

**Penetration time of glove material**Value for the permeation: Level 6  $\geq 480$  min.

The exact break through 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 work clothing**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Appearance:**

<b>Form:</b>	Pasty
<b>Colour:</b>	Beige
<b>Odour:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

**pH-value:** Not applicable.**Change in condition**

<b>Melting point/freezing point:</b>	Undetermined.
<b>Initial boiling point and boiling range:</b>	145 °C

**Flash point:** 31 °C**Flammability (solid, gas):** Not applicable.**Decomposition temperature:** Not determined.**Auto-ignition temperature:** Not determined.

**Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

**Explosion limits:**

<b>Lower:</b>	1.1 Vol %
<b>Upper:</b>	6.1 Vol %

**Vapour pressure at 20 °C:** 6.7 hPa**Density:** 1.84-1.87 g/cm<sup>3</sup>**Vapour density** Not determined.**Evaporation rate** Not determined.

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<b>Solubility in / Miscibility with water:</b>	Not miscible or difficult to mix.
<b>Partition coefficient: n-octanol/water:</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
<b>9.2 Other information</b>	No further relevant information available.

**SECTION 10: Stability and reactivity****10.1 Reactivity** No decomposition if used according to specifications.**10.2 Chemical stability** No decomposition if used and stored according to specifications.**10.3 Possibility of hazardous reactions**

Exothermic polymerisation.

Reacts with peroxides and other radical forming substances.

Fumes can combine with air to form an explosive mixture.

**10.4 Conditions to avoid** Protect from heat and direct sunlight.**10.5 Incompatible materials:** No further relevant information available.**10.6 Hazardous decomposition products:**

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

**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 relevant for classification:****100-42-5 styrene**

Oral	LD50	5,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	11.8 mg/l (rat)

**123-26-2 N,N'-ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide)**

Oral	LD50	>2,000 mg/kg (rat)
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**141-78-6 ethyl acetate**

Oral	LD50	6,100 mg/kg (rat)
Dermal	LD50	>20,000 mg/kg (rabbit)
Inhalative	LC50/6 h	58 mg/l (rat)

**108-31-6 maleic anhydride**

Oral	LD50	1,090 mg/kg (rat)
Dermal	LD50	2,620 mg/kg (rabbit)

**Primary irritant effect:****Skin corrosion/irritation**

Causes skin irritation.

**Serious eye damage/irritation**

Causes serious eye irritation.

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**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**

Suspected of damaging the unborn child.

**STOT-single exposure** Based on available data, the classification criteria are not met.**STOT-repeated exposure**

Causes damage to the hearing organs through prolonged or repeated exposure.

**Aspiration hazard** Based on available data, the classification criteria are not met.**SECTION 12: Ecological information****12.1 Toxicity****Aquatic toxicity:****100-42-5 styrene**

LC50/96 h	4.02 mg/l (Pimephales promelas)
EC50/48 h	4.7 mg/l (Daphnia magna)
EC50/72 h	4.9 mg/l (Pseudokirchnerella subcapitata)

**123-26-2 N,N'-ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide)**

EC50/72 h	100 mg/l (algae)
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**141-78-6 ethyl acetate**

LC50/96 h	230 mg/l (Pimephales promelas)
EC50/48 h	165 mg/l (Daphnia cucullata)
EC50/72 h	>900 mg/l (Scenedesmus subspicatus)
EC3/16 h	650 mg/l (Pseudomonas putida)

**12.2 Persistence and degradability****100-42-5 styrene**

Biodegradation	70.9 % (readily biodegradable) (ISO 9408, 28 d, aerobic)
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**141-78-6 ethyl acetate**

Biodegradation	93.9 % (readily biodegradable) (OECD 301 B, aerobic)
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**12.3 Bioaccumulative potential****100-42-5 styrene**

BCF	74 (-)
log Pow	2.96

**141-78-6 ethyl acetate**

BCF	30 (-)
log Pow	0.66

**12.4 Mobility in soil****100-42-5 styrene**

log Koc	2.55
Koc	352

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**123-26-2 N,N'-ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide)**log K<sub>oc</sub> >5.63**Additional ecological information:****General notes:**

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

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

**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 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 hazardous substances

**Uncleaned packaging:****Recommendation:** Disposal must be made according to official regulations.**SECTION 14: Transport information****14.1 UN-Number**  
ADR, IMDG, IATA

UN1866

**14.2 UN proper shipping name**  
ADR  
IMDG, IATA1866 RESIN SOLUTION  
RESIN SOLUTION**14.3 Transport hazard class(es)**  
ADR, IMDG, IATA**Class**  
**Label**3  
3**14.4 Packing group**  
ADR, IMDG, IATA

III

**14.5 Environmental hazards:**

Not applicable.

**14.6 Special precautions for user**  
**Hazard identification number (Kemler code):**  
**EMS Number:**Warning: Flammable liquids.  
30  
F-E,S-E

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<b>Stowage Category</b>	A
<b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
<b>Transport/Additional information:</b>	
<b>ADR</b>	
Limited quantities (LQ)	5L
Transport category	3
Tunnel restriction code	D/E
Remarks:	ADR 2.2.3.1.5
<b>IMDG</b>	
Limited quantities (LQ)	5L
Remarks:	IMDG 2.3.2.5
<b>UN "Model Regulation":</b>	UN 1866 RESIN SOLUTION, 3, 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.

**Seveso category P5c** FLAMMABLE LIQUIDS

**Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t

**Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

**REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

**National regulations:**

**Information about limitation of use:**

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

**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**

H225 Highly flammable liquid and vapour.

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

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.

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- H332 Harmful if inhaled.  
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H335 May cause respiratory irritation.  
 H336 May cause drowsiness or dizziness.  
 H361d Suspected of damaging the unborn child.  
 H361f Suspected of damaging fertility.  
 H372 Causes damage to the hearing organs through prolonged or repeated exposure.  
 H400 Very toxic to aquatic life.  
 H412 Harmful to aquatic life with long lasting effects.

**Classification according to Regulation (EC) No 1272/2008**

Flammable liquids	Bridging principles
Skin corrosion/irritation Serious eye damage/eye irritation Skin sensitisation Reproductive toxicity Specific target organ toxicity (repeated exposure)	The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

**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)  
 DNEL: Derived No-Effect Level (REACH)  
 PNEC: Predicted No-Effect Concentration (REACH)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 PBT: Persistent, Bioaccumulative and Toxic  
 vPvB: very Persistent and very Bioaccumulative  
 Flam. Liq. 2: Flammable liquids – Category 2  
 Flam. Liq. 3: Flammable liquids – Category 3  
 Acute Tox. 4: Acute toxicity - inhalation – Category 4  
 Skin Corr. 1B: Skin corrosion/irritation – Category 1B  
 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  
 Resp. Sens. 1: Sensitisation - Respiratory. Hazard category 1  
 Skin Sens. 1: Sensitisation - Skin. Hazard Category 1  
 Skin Sens. 1A: Sensitisation - Skin. Hazard Category 1A  
 Skin Sens. 1B: Sensitisation - Skin. Hazard Category 1B  
 Repr. 2: Reproductive toxicity. Hazard Category 2  
 Repr. 2: Reproductive toxicity. Hazard Category 2  
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
 STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1  
 Asp. Tox. 1: Aspiration hazard – Category 1  
 Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1  
 Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

**Sources** European Chemicals Agency, <http://echa.europa.eu/>

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