

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

### 1.1 Product identifier

Trade name: **RADEX MULTI GLASS PUTTY**

Article number: **200611**

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. Tel: +3716738778

Person responsible for the MSDS aigars@radex-europe.lv

### 1.4 Emergency telephone number:

Product safety Department Tel: +3716738778

## 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.

### 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



GHS02



GHS07



GHS08

Signal word Danger

Hazard-determining components of labelling:

styrene

Hazard statements

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H361d Suspected of damaging the unborn child.

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

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**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.

P314 Get medical advice/attention if you feel unwell.

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.

<b>Dangerous components:</b>		
CAS: 100-42-5 EINECS: 202-851-5 Reg.nr.: 01-2119457861-32	styrene ----- ⚠ Flam. Liq. 3, H226; ⚠ Repr. 2, H361d; STOT RE 1, H372; Asp. Tox. 1, H304; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335; Aquatic Chronic 3, H412	10-<20%
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: 108-65-6 EINECS: 203-603-9 Reg.nr.: 01-2119475791-29	2-methoxy-1-methylethyl acetate ----- ⚠ Flam. Liq. 3, H226	0.1-1%

**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.

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

**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.*

*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.*

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

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

**8.1 Control parameters**

<b>Ingredients with limit values that require monitoring at the workplace:</b>	
<b>100-42-5 styrene</b>	
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
<b>141-78-6 ethyl acetate</b>	
WEL (Great Britain)	Short-term value: 400 ppm Long-term value: 200 ppm
<b>108-65-6 2-methoxy-1-methylethyl acetate</b>	
WEL (Great Britain)	Short-term value: 548 mg/m <sup>3</sup> , 100 ppm Long-term value: 274 mg/m <sup>3</sup> , 50 ppm Sk
IOELV (EU)	Short-term value: 550 mg/m <sup>3</sup> , 100 ppm Long-term value: 275 mg/m <sup>3</sup> , 50 ppm Skin
<b>Regulatory information WEL (Great Britain): EH40/2011</b>	
<b>DNELs</b>	
<b>100-42-5 styrene</b>	
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)
<b>141-78-6 ethyl acetate</b>	
Dermal	DNEL 63 mg/kg bw/day (long-term - systemic effects, workers)
Inhalative	DNEL 1468 mg/m <sup>3</sup> (acute - systemic effects, workers) 1468 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)
<b>108-65-6 2-methoxy-1-methylethyl acetate</b>	
Dermal	DNEL 153.5 mg/kg bw/day (long-term - systemic effects, workers)
Inhalative	DNEL 275 mg/m <sup>3</sup> (long-term - systemic effects, workers)
<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>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)

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PNEC	650 mg/l (sewage treatment plants) 1.15 mg/kg (freshwater sediment environment) 0.115 mg/kg (marine sediment environment)
<b>108-65-6 2-methoxy-1-methylethyl acetate</b>	
PNEC	0.635 mg/l (freshwater environment) 0.0635 mg/l (marine environment) 6.35 mg/l (intermittent releases) 100 mg/l (sewage treatment plants)
PNEC	3.29 mg/kg (freshwater sediment environment) 0.329 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 A/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).

#### 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

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**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>	Canary yellow
<b>Odour:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

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

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	145 °C Undetermined.

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

<b>Density:</b>	~ 1.1 g/cm <sup>3</sup>
<b>Vapour density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.

**Solubility in / Miscibility with water:** Not miscible or difficult to mix.**Partition coefficient (n-octanol/water):** Not determined.**Viscosity:**

<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.

**9.2 Other information** 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.

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**\* 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	5000 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg (rat)
Inhalative	LC50/4 h	11.8 mg/l (rat)

**141-78-6 ethyl acetate**

Oral	LD50	6100 mg/kg (rat)
Dermal	LD50	> 20000 mg/kg (rabbit)
Inhalative	LC50/6 h	58 mg/l (rat)

**108-65-6 2-methoxy-1-methylethyl acetate**

Oral	LD50	>5000 mg/kg (rat)
Dermal	LD50	>5000 mg/kg (rabbit)
Inhalative	LC50/6 h	4345 mg/l (rat)

**Primary irritant effect:**

**Skin corrosion/irritation**

Causes skin irritation.

**Serious eye damage/irritation**

Causes serious eye irritation.

**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

**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 ( <i>Pimephales promelas</i> )
EC50/48 h	4.7 mg/l ( <i>Daphnia magna</i> )
EC50/72 h	4.9 mg/l ( <i>Pseudokirchnerella subcapitata</i> )

**141-78-6 ethyl acetate**

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

**108-65-6 2-methoxy-1-methylethyl acetate**

LC50/96 h	>100 mg/l (fish)
EC50/48 h	>500 mg/l ( <i>Daphnia magna</i> )

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EC20/30 min	>1000 mg/l (microorganisms)
EC50/72 h	>1000 mg/l ( <i>Pseudokirchnerella subcapitata</i> )
EC50	>100 mg/l ( <i>Pseudokirchnerella subcapitata</i> )
	>100 mg/l ( <i>Pimephales promelas</i> )
	>100 mg/l ( <i>Daphnia magna</i> )

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

Biodegradation | 70.9 % (readily biodegradable) (ISO 9408, 28 d, aerobic)

**141-78-6 ethyl acetate**

Biodegradation | 93.9 % (readily biodegradable) (OECD 301 B, aerobic)

**108-65-6 2-methoxy-1-methylethyl acetate**

Biodegradation | 100 % (readily biodegradable) (OECD 302 B, 8 d, aerobic)

**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

**108-65-6 2-methoxy-1-methylethyl acetate**

log Pow | 0.56

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

log Koc | 2.55

Koc | 352

**108-65-6 2-methoxy-1-methylethyl acetate**

Koc | 1.7

**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.

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**\* SECTION 14: Transport information**

<b>14.1 UN-Number</b> ADR, IMDG, IATA	UN1866
<b>14.2 UN proper shipping name</b> ADR IMDG, IATA	1866 RESIN SOLUTION RESIN SOLUTION
<b>14.3 Transport hazard class(es)</b> ADR, IMDG, IATA	 Class 3 Label 3
<b>14.4 Packing group</b> ADR, IMDG, IATA	III
<b>14.5 Environmental hazards:</b> Marine pollutant (IMDG):	No
<b>14.6 Special precautions for user</b> Danger code (Kemler): EMS Number: Stowage Category	Warning: Flammable liquids. 30 F-E,S-E 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) Transport category Tunnel restriction code Remarks:	5L 3 D/E ADR 2.2.3.1.5
-----	
<b>IMDG</b> Limited quantities (LQ) Remarks:	5L 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, 30

**National regulations:**

**Information about limitation of use:**

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

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

**\* SECTION 16: Other information**

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

**Relevant phrases**

H225 *Highly flammable liquid and vapour.*

H226 *Flammable liquid and vapour.*

H304 *May be fatal if swallowed and enters airways.*

H315 *Causes skin irritation.*

H319 *Causes serious eye irritation.*

H332 *Harmful if inhaled.*

H335 *May cause respiratory irritation.*

H336 *May cause drowsiness or dizziness.*

H361d *Suspected of damaging the unborn child.*

H372 *Causes damage to the hearing organs through prolonged or repeated exposure.*

H412 *Harmful to aquatic life with long lasting effects.*

**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 – Category 4*

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

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