

Safety Data Sheet

according to Regulation (EU) No. 1907/2006

SU-8 3000 Series Resists

Print date : 15.6.2009

Product code : MY3110XX

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1. Identification of the substance/preparation and of the company/undertaking

Identification of the substance or preparation

SU-8 3000 Series Resists

Use of the substance/preparation

Organic Resin Solution

Company/undertaking identification

Company name :	MicroChem Corp.	
Street :	90 Oak Street	
Place :	USA-MA 02464-1418 Newton	
Post-office box :	PO Box 426	
	USA-MA 02464-0002 Newton	
Telephone :	+1 617 965 5511	Telefax : +1 617 965 5818
e-mail :	productsafety@microchem.com	
Internet :	www.microchem.com	
Emergency telephone :	Chemtrec (International): +1 703 527 3887	

2. Hazards identification

Classification

Indications of danger : Harmful, Irritant, Dangerous for the environment
 R-phrases :
 Flammable.
 Harmful if swallowed.
 Irritating to eyes and skin.
 May cause sensitization by skin contact.
 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 Possible risks of irreversible effects.

3. Composition/information on ingredients

Chemical characterization (Mixture)

Hazardous components

EC-No.	CAS-No.	Chemical name	Quantity	Classification
	28906-96-9	Epoxy Resin	35 - 80 %	Muta. Cat. 3, Xn R36-43-68
204-435-9	120-92-3	cyclopentanone	20 - 60 %	Xi R10-36/38
	9003-36-5	Formaldehyde Polymer	1 - 30 %	Xi R36/38
	244772-00-7	Cycloaliphatic Epoxy Resin	1 - 30 %	Xi R36/38
203-572-1	108-32-7	propylene carbonate	1 - 5 %	Xi R36
403-500-0	109037-75-4	Mixture of triarylsulfonium hexafluoroantimonate salts	1 - 5 %	N R43-50-53
		Proprietary Silane	< 2 %	Xn, Xi R22-36

Full text of each relevant R phrase can be found in heading 16.

4. First aid measures

After inhalation

Provide fresh air. In case of breathing difficulties administer oxygen. If victim is at risk of losing consciousness, position and transport on their side. In case of irritation of the respiratory tract seek medical advice.

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After contact with skin

After contact with skin, wash immediately with plenty of water. Change contaminated clothing. Subsequently wash again with: Water and soap. In case of skin irritation, seek medical treatment.

After contact with eyes

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Consult an ophthalmologist.

After ingestion

Do not induce vomiting. Rinse mouth thoroughly with water. Immediately get medical attention.

Advice to doctor

Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media

Carbon dioxide (CO₂). Dry extinguishing powder. Foam.

Extinguishing media which must not be used for safety reasons

High power water jet.

Special exposure hazards arising from substance or preparation itself, combustion products, resulting gases

In case of fire and/or explosion do not breathe fumes.

Special protective equipment for fire-fighters

In case of fire: Wear self-contained breathing apparatus. Wear chemical resistant suit.

Additional information

Use water spray/stream to protect personnel and to cool endangered containers. Contaminated fire-fighting water must be collected separately. Beware of reignition. Reignition possible at long range.

6. Accidental release measures

Personal precautions

Remove all sources of ignition. The following must be prevented: inhalation. skin contact. Eye contact. Provide adequate ventilation.

Environmental precautions

Do not empty into drains or the aquatic environment.

Methods for cleaning up/taking up

Clean contaminated objects and areas thoroughly observing environmental regulations. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Collect in closed containers for disposal.

Additional information

In case of gas being released or leakage into waters, ground or the drainage system, the appropriate authorities must be informed.

7. Handling and storage

Handling**Advice on safe handling**

Use only in well-ventilated areas. Keep away from sources of ignition - No smoking.

Advice on protection against fire and explosion

Take precautionary measures against static discharges.

Storage

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Requirements for storage rooms and vessels

Keep container tightly closed and in a well-ventilated place. Suitable material for floor covering:
Solvent-proof.

Further information on storage conditions

Protect against: heat. UV-radiation/sunlight.

Storageclass (VCI) : 3A

8. Exposure controls/personal protection

Exposure limit values

Exposure controls

Protective and hygiene measures

When using do not eat, drink or smoke. Protect skin by using skin protective cream. After work, wash hands and face. Immediately remove any wetted clothing, shoes or stockings.

Respiratory protection

If technical suction or ventilation measures are not possible or are insufficient, protective breathing apparatus must be worn. Respiratory protection required in case of: aerosol or mist generation. Filter respirator (full mask or mouth-piece) with filter: A

Hand protection

Tested protective gloves are to be worn: Single-use gloves.
German Industry Norms (DIN) / European Norms (EN): EN 374

Duration of wearing with permanent contact:

Suitable material: Butyl rubber.

Thickness of glove material: 0.7 mm

penetration time (maximum wearing period): > 480 min

Recommended protective gloves brand: KCL 898 Butoject, Manufacturer: KCL GmbH, D-36124 Eichenzell, Source of supply: www.kcl.de

Duration of wearing with occasional contact (splashes):

Suitable material: FKM (fluororubber).

Thickness of glove material: 0.7 mm

penetration time (maximum wearing period): > 120 min

Recommended protective gloves brand: KCL 890 Vitoject, Manufacturer: KCL GmbH, D-36124 Eichenzell, Source of supply: www.kcl.de

In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer of the gloves.

Eye protection

Suitable eye protection: Tightly sealed safety glasses.

Skin protection

For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes).

9. Physical and chemical properties

General information

Physical state : liquid
Colour : colourless, clear
Odour : characteristic

Important health, safety and environmental information

Test method

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Changes in the physical state

Boiling point :	130 °C (cyclopentanone)
Flash point :	30 °C (cyclopentanone)
Lower explosion limits :	1.3 vol. % (cyclopentanone)
Upper explosion limits :	not determined (cyclopentanone)
Vapour pressure : (at 20 °C)	11.6 hPa
Density (at 25 °C) :	1.075-1.153 g/cm ³
Water solubility :	not determined

Other information

Ignition temperature : 550 °C (cyclopentanone)

10. Stability and reactivity

Conditions to avoid

UV-radiation/sunlight. heat. Only use material in places where open light, fire and other sources of ignition can be kept away.

Materials to avoid

Acid, concentrated. Alkalis (alkalis), concentrated. Oxidizing agents, strong.

Hazardous decomposition products

Carbon monoxide. Carbon dioxide.

11. Toxicological information

Acute toxicity

Acute toxicity, oral LD50:

1180 mg/kg species: Rat. (cyclopentanone)
 20700 mg/kg species: Rat. (propylene carbonate)
 2000 mg/kg species: Rat. (Cycloaliphatic Epoxy Resin)
 7010 mg/kg species: Rat. (Proprietary Silane)
 >2000 mg/kg species: Rat. (Epoxy Resin)

Acute toxicity, dermal LD50:

>5000 mg/kg species: Rabbit. (cyclopentanone)
 >20000 mg/kg species: Rabbit. (propylene carbonate)
 >2000 mg/kg species: Rat. (Epoxy Resin)

Acute toxicity, inhalant LC50:

>19.5 mg/l /4 h species: Rat. (cyclopentanone)
 >5.0 mg/l species: Rat. (Epoxy Resin)
 5.3 mg/l species: Rat. (Proprietary Silane)

Carcinogenic/mutagenic/toxic effects for reproduction

Epoxy Resin:

category 3 (EU): There is well-founded concern about the possible mutagenic effects on human beings. Evidence exists of genotoxicity in-vitro . remark: Ames test positive.

12. Ecological information

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Ecotoxicity

Acute fish toxicity LC50: :

2950 mg/l /48 h species: Leuciscus idus (cyclopentanone)
 >1000 mg/l /96 h species: Cyprinus carpio (Carp) (propylene carbonate)
 237 mg/l /96 h species: Oncorhynchus mykiss (Proprietary Silane)
 >100 mg/l (Epoxy Resin)

Acute Daphnia toxicity EC50:

1435 mg/l /24 h species: Daphnia magna (cyclopentanone)
 >500 mg/l /48 h species: Daphnia magna (propylene carbonate)
 324 mg/l /48 h species: Daphnia magna (Proprietary Silane)

Mixture of triarylsulfonium hexafluoroantimonate salts: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Avoid release to the environment.

Bioaccumulative potential

cyclopentanone:

Distribution coefficient (n-octanol / water) (log P O/W): 0.24 Method: calculated.
 Due to the n-octanol-water partition coefficient, a bio-accumulation in organisms is not to be expected.

Further information

product has not been tested. Do not allow uncontrolled leakage of product into the environment.

13. Disposal considerations

Advice on disposal

Appropriate disposal / Product: Remove according to the regulations.
 Contaminated packaging: Cleaned containers may be recycled.

14. Transport information

Land transport (ADR/RID)

UN number :	1866
ADR/RID class :	3
Classification code :	F1
Warning plate	
Hazard-no. :	30
Hazard label :	3
ADR/RID packing group :	III
Limited quantity :	LQ7

Description of the goods

Resin solution

Other applicable information (land transport)

Special provisions: 640E
 Excepted Quantity: E1
 Transport category: 3
 Tunnel restriction code: D/E

Inland waterways transport

Other applicable information (inland waterways transport)

Not classified for this carrier.

Marine transport

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UN number : 1866
 IMDG code : 3
 Marine pollutant : •
 Hazard label : 3
 IMDG packing group : III
 EmS : F-E, S-E
 Limited quantity : 5 L

Description of the goods

Resin solution

Other applicable information (marine transport)

Special provisions: 223, 944, 955

Air transport

UN/ID number : 1866
 ICAO/IATA-DGR : 3
 Hazard label : 3
 ICAO packing group : III
 Limited quantity Passenger : 10 L
 IATA-packing instructions - Passenger : 309
 IATA-max. quantity - Passenger : 60 L
 IATA-packing instructions - Cargo : 310
 IATA-max. quantity - Cargo : 220 L

Description of the goods

Resin solution

Other applicable information (air transport)

Excepted Quantity: E1
 Passenger-LQ: Y309
 Cargo-Maximum: 220 L

15. Regulatory information

Labelling

Danger symbols : Xi - Irritant; N - Dangerous for the environment



Xi - Irritant



N - Dangerous for the environment

Hazardous component(s) to be indicated on label

Mixture of triarylsulfonium hexafluoroantimonate salts

R phrases

10 Flammable.
 22 Harmful if swallowed.
 36/38 Irritating to eyes and skin.
 43 May cause sensitization by skin contact.
 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 68 Possible risks of irreversible effects.

S phrases

23 Do not breathe vapour .
 24 Avoid contact with skin.

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- 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
 61 Avoid release to the environment. Refer to special instructions / Safety data sheets.
 36/37 Wear suitable protective clothing and gloves.

EU regulatory information

1999/13/EC (VOC) : This chemical is a VOC according to 99/13/EC. Volatile organic compounds (VOC) in percentage by weight: 22-52 %

National regulatory information

Employment restrictions : Observe employment restrictions for young people.
 Water contaminating class (D) : 2 - water contaminating

16. Other information**Full text of R-phrases referred to under sections 2 and 3**

- 10 Flammable.
 22 Harmful if swallowed.
 36 Irritating to eyes.
 36/38 Irritating to eyes and skin.
 43 May cause sensitization by skin contact.
 50 Very toxic to aquatic organisms.
 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 53 May cause long-term adverse effects in the aquatic environment.
 68 Possible risks of irreversible effects.

Further Information

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)