

Safety Data Sheet

according to Regulation (EC) No 1907/2006

SU-8 2000 Series Resists

Print date: 07.12.2012

Product code: MY1110XX

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

SU-8 2000 Series Resists

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

Manufacture of computer, electronic and optical products, electrical equipment.

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

Company name:	MicroChem Corporation	
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	

Supplier

Company name:	micro resist technology GmbH	
Street:	Koepenicker Str. 325	
Place:	D-12555 Berlin	
Telephone:	+49 30 641670-100	Telefax: +49 30 641670-200
e-mail:	safety@microresist.de	
Internet:	www.microresist.de	

Emergency telephone: Chemtrec (International): +1 703 527 3887**SECTION 2: Hazards identification****Classification of the substance or mixture**

Indications of danger : Harmful, Irritant, Dangerous for the environment

R-phrases:

Flammable.

Irritating to eyes and skin.

May cause sensitization by skin contact.

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Possible risks of irreversible effects.

GHS classification

Hazard categories:

Flammable liquid: Flam. Liq. 3

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Respiratory/skin sensitization: Skin Sens. 1

Germ cell mutagenicity: Muta. 2

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Flammable liquid and vapour.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

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Suspected of causing genetic defects.
Toxic to aquatic life with long lasting effects.

Label elements

Hazardous components which must be listed on the label

cyclopentanone
Epoxy Resin
Mixture of triarylsulfonium hexafluoroantimonate salts
hexafluoroantimonate salt

Signal word:

Warning

Pictograms:

GHS02-GHS07-GHS08-GHS09



Hazard statements

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H341	Suspected of causing genetic defects.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P352	Wash with plenty of soap and water.
P363	Wash contaminated clothing before reuse.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Other hazards

No data available

SECTION 3: Composition/information on ingredients

Mixtures

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Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification	
Index No	GHS classification	
REACH No		
204-435-9	cyclopentanone	23 - 96 %
120-92-3	Xi R10-36/38	
606-025-00-9	Flam. Liq. 3, Eye Irrit. 2, Skin Irrit. 2; H226 H319 H315	
	Epoxy Resin	3 - 75 %
28906-96-9	Muta. Cat. 3, Xn R36-43-68	
	Eye Irrit. 2, Skin Sens. 1, Muta. 2; H319 H317 H341	
203-572-1	propylene carbonate	0.3 - 5 %
108-32-7	Xi R36	
607-194-00-1	Eye Irrit. 2; H319	
	Mixture of triarylsulfonium hexafluoroantimonate salts	0.3 - 5 %
109037-75-4	N R43-50-53	
	Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1; H317 H400 H410	
	hexafluoroantimonate salt	0.3 - 5 %
71449-78-0	Xi, N R43-50-53	
	Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1; H317 H400 H410	

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

SECTION 4: First aid measures

Description of first aid measures

General information

In case of accident or if you feel unwell, seek medical advice immediately (show safety data sheet if possible).

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.

After contact with skin

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

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. Consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink large quantities of water.

Caution if victim vomits: Risk of aspiration!

Medical treatment necessary.

Most important symptoms and effects, both acute and delayed

No data available

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

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Extinguishing media

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 hazards arising from the substance or mixture

Concentrated vapours are heavier than air. Vapours may form explosive mixtures with air. In case of fire and/or explosion do not breathe fumes. Beware of reignition.

Advice for firefighters

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

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eye and clothing. Wear personal protection equipment.

Environmental precautions

Do not empty into drains or the aquatic environment.

Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Collect in closed containers for disposal. Clean contaminated objects and areas thoroughly observing environmental regulations. Do not rinse down with water.

Reference to other sections

Treat the assimilated material according to the section on waste disposal.
See protective measures under point 7 and 8.

SECTION 7: Handling and storage

Precautions for safe handling

Advice on safe handling

Use only in well-ventilated areas. Only use material in places where open light, fire and other sources of ignition can be kept away. Do not breathe vapour or spray.

Advice on protection against fire and explosion

Take precautionary measures against static discharges. Keep away from sources of ignition - No smoking.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place.
Suitable material for Container: polyethylene. Glass.
Suitable material for floor covering: Solvent-proof.

Further information on storage conditions

Protect against: heat. UV-radiation/sunlight.

Specific end use(s)

No data available

SECTION 8: Exposure controls/personal protection

Control parameters

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Additional advice on limit values

No data available

Exposure controls



Occupational exposure controls

In case of open handling equipment with built-in suction must be used. Do not breathe gas/fumes/vapour/spray. Wear personal protection equipment. Provide adequate ventilation.

Protective and hygiene measures

Take off immediately all contaminated clothing. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

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): DIN 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).

Environmental exposure controls

Do not empty into drains.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state:	liquid
Colour:	light yellow - colourless
Odour:	characteristic

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Test method

pH-Value: No data available

Changes in the physical state

Melting point: No data available

Boiling point: 130 °C

Flash point: 30 °C

Explosive properties

Product is: not explosive.

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

Lower explosion limits: No data available

Upper explosion limits: No data available

Ignition temperature: 430 °C

Vapour pressure: No data available

Vapour pressure: No data available

Density: No data available

Water solubility: partially soluble

Partition coefficient: No data available

Vapour density: No data available

Evaporation rate: No data available

Other information

No data available

SECTION 10: Stability and reactivity

Reactivity

No data available

Chemical stability

No data available

Possibility of hazardous reactions

No data available

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.

Incompatible materials

Oxidizing agents, strong. Reducing agents, strong. acid, concentrated. Alkalis (alkalis), concentrated. Iron.

Hazardous decomposition products

Carbon monoxide. Carbon dioxide.

Further information

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Acute toxicity, oral LD50: >2000 mg/kg species: Rat. (cyclopentanone)

Acute toxicity, inhalant LC50: >19.5 mg/l /4 h species: Rat. (cyclopentanone)

Acute toxicity, oral LD50: >2000 mg/kg species: Rat. (Epoxy Resin)

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Acute toxicity, inhalant LC50: >5.0 mg/l species: Rat. (Epoxy Resin)

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
28906-96-9	Epoxy Resin				
	oral	LD50 mg/kg	>2000	Rat.	
	dermal	LD50 mg/kg	>2000	Rabbit.	

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.

SECTION 12: Ecological information

Toxicity

cyclopentanone:

Acute fish toxicity LC50: 2950 mg/l /48 h species: Leuciscus idus
Acute Daphnia toxicity EC50: 1435 mg/l /24 h species: Daphnia magna

Persistence and degradability

No data available

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.

Mobility in soil

No data available

Results of PBT and vPvB assessment

No data available

Other adverse effects

No data available

Further information

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

SECTION 13: Disposal considerations

Waste treatment methods

Advice on disposal

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

Contaminated packaging

Handle contaminated packaging in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

UN number: UN1866

UN proper shipping name: Resin solution

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Transport hazard class(es): 3**Packing group:** III

Hazard label: 3



Classification code: F1

Special Provisions: 640E

Limited quantity: 5 L

Transport category: 3

Hazard No: 30

Tunnel restriction code: D/E

Other applicable information (land transport)

Excepted Quantity: E1

Marine transport**UN number:** UN1866**UN proper shipping name:** Resin solution**Transport hazard class(es):** 3**Packing group:** III

Hazard label: 3



Special Provisions: 223, 955

Limited quantity: 5 L

EmS: F-E, S-E

Other applicable information (marine transport)

Excepted Quantity: E1

Air transport**UN/ID number:** UN1866**UN proper shipping name:** Resin solution**Transport hazard class(es):** 3**Packing group:** III

Hazard label: 3



Special Provisions: A3

Limited quantity Passenger: 10 L

IATA-packing instructions - Passenger: 355

IATA-max. quantity - Passenger: 60 L

IATA-packing instructions - Cargo: 366

IATA-max. quantity - Cargo: 220 L

Other applicable information (air transport)

Excepted Quantity: E1

Passenger-LQ: Y344

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Environmental hazards

Dangerous for the environment: yes



Special precautions for user

No data available

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No data available

SECTION 15: Regulatory information

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

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: 20-98 %

National regulatory information

Employment restrictions: Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing.

Water contaminating class (D): 2 - water contaminating

Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

chapter: 1; 2; 3; 4; 6; 7; 8; 9; 10; 12; 14; 15; 16

Full text of R-phrases referred to under sections 2 and 3

10	Flammable.
36	Irritating to eyes.
36/38	Irritating to eyes and skin.
43	May cause sensitization by skin contact.
50	Very toxic to aquatic organisms.
51/53	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.

Full text of H-Statements referred to under sections 2 and 3

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H341	Suspected of causing genetic defects.
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.

Further Information

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.

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