

Safety Data Sheet

according to 2001/58/EC

mr-I 7000E Series Imprint Polymer

Print date : 15.12.2005

Product code : R341XXX

Page 1 of 6

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

1.1 Identification of the substance or preparation

mr-I 7000E Series Imprint Polymer

Use of the substance/preparation

Polymer for Nanoimprint Lithography

1.2 Company/undertaking identification

Company name : micro resist technology GmbH
Street : Koepenicker Str. 325, Haus 211
Place : D-12555 Berlin

Telephone : +49 30 65762192

Telefax : +49 30 65762193

e-mail : mrt@microresist.de
Internet : www.microresist.de

2. Composition/information on ingredients

Chemical characterization (preparation)

Hazardous components

EC-No.	CAS-No.	Chemical name	Quantity	Classification
203-603-9	108-65-6	2-methoxy-1-methylethyl acetate	80-100 %	Xi R10-36

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

3. Hazards identification

Classification

Symbols : Irritant
R-phrases :
Flammable.
Irritating to eyes.

4. First aid measures

After inhalation

Provide fresh air. In case of difficulties of breathing 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 soap and plenty of water. Change contaminated clothing . If skin becomes irritated, seek medical treatment.

After contact with eyes

Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Consult an ophthalmologist.

After ingestion

Rinse mouth with water. Let water be swallowed in little sips (dilution effect). Consult physician.

Advice to doctor

Treat symptomatically.

5. Fire-fighting measures

Safety Data Sheet

according to 2001/58/EC

mr-I 7000E Series Imprint Polymer

Print date : 15.12.2005

Product code : R341XXX

Page 2 of 6

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 arriving 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 a chemical resistant suit.

Additional information

Contaminated fire-fighting water must not get into the sewerage network.

6. Accidental release measures

Personal precautions

Remove from all sources of ignition. Contact with the skin and inhalation of aerosols/vapors from the preparation must be avoided. Provide adequate ventilation.

Environmental precautions

Do not empty into drains or the aquatic environment.

Methods for cleaning up/taking up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Do not rinse down with water. Collect in closed containers for disposal. Clean contaminated articles and floor according to the environmental legislation.

7. Handling and storage

7.1 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.

7.2 Storage

Requirements for storage rooms and vessels

Keep container tightly closed and in a well-ventilated place. Storage temperature: of °C: 18 up to °C: 25 Keep away from sources of ignition. No smoking. Take precautionary measures against static discharges.

Further information on storage conditions

Protect against: heating. UV-solarization/sunlight.

Storageclass (VCI) :

3 A

8. Exposure controls/personal protection

8.1 Exposure limit values

Exposure limits (EH40)

CAS No.	Substance	ml/m ³	mg/m ³	F/ml	Category	Origin
108-65-6	1-Methoxypropyl acetate	50	274		TWA (8 h)	WEL
		100	548		STEL (15 min)	WEL

8.2 Exposure controls

Safety Data Sheet

according to 2001/58/EC

mr-I 7000E Series Imprint Polymer

Print date : 15.12.2005

Product code : R341XXX

Page 3 of 6

Protective and hygiene measures

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

Respiratory protection

If technical suction or ventilation measures are not possible or are insufficient, protective breathing apparatus must be worn. breathing protection indicated: 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 Standards / EN standards: EN 374

Duration of wearing with permanent contact:

Qualified materials: Butyl rubber.

Layer thickness: 0.7 mm

Breakthrough time: > 480 min

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

Duration of wearing with occasional contact (splashes):

Qualified materials: NBR (Nitrile rubber).

Layer thickness: 0.4 mm

Breakthrough time: > 30 min

Recommended makes of protective gloves: KCL 730 Camatril-Velours, 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

9.1 General information

Physical state : liquid
Colour : clear
Odour : hydrocarbons, aromatic.

9.2 Important health, safety and environmental information

	Test method
Changes in the physical state	
Boiling point :	148-151 °C (2-methoxy-1-methylethyl acetate)
Flash point :	48.0 °C (2-methoxy-1-methylethyl acetate)
Lower explosion limits :	1.5 vol. % (2-methoxy-1-methylethyl acetate)
Upper explosion limits :	10.8 vol. % (2-methoxy-1-methylethyl acetate)
Vapour pressure : at (20 °C)	3.1 hPa (2-methoxy-1-methylethyl acetate)

Safety Data Sheet

according to 2001/58/EC

mr-I 7000E Series Imprint Polymer

Print date : 15.12.2005

Product code : R341XXX

Page 4 of 6

Vapour pressure : at (50 °C)	21 hPa	(2-methoxy-1-methylethyl acetate)
Density (at 25 °C) :	0.975-0.985 g/cm ³	
Water solubility :	insoluble	
Viscosity / dynamic : at (25 °C)	4-10 mPa·s	

9.3 Other information

Ignition temperature :	315 °C	(2-methoxy-1-methylethyl acetate)
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10. Stability and reactivity

Conditions to avoid

UV-solarization/sunlight. heating. Only use the material in places where open light, fire and other flammable sources can be kept away. Take precautionary measures against static discharges.

Materials to avoid

Oxidizing agents.

11. Toxicological information

Acute toxicity

Acute toxicity, oral LD50: 8532 mg/kg species: rat.
Acute toxicity, dermal LD50: 7500 mg/kg species: rabbit.
The statement is derived from the properties of the components.

12. Ecological information

Ecotoxicity

Acute fish toxicity LC50: 161 mg/l species: Pimephales promelas
Acute Daphnia toxicity EC50: 408 mg/l species: Daphnia magna

Additional information

The information about ecology refer to the main components.
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)

ADR/RID class :	3
Warnings plate	
Hazard-no. :	30
UN number :	1866
Hazard label :	3
ADR/RID packing group :	III

Description of the goods

Proper Shipping Name: RESIN SOLUTION

Inland waterways transport

Remarks (inland waterways transport)

Not classified for this carrier.

Safety Data Sheet

according to 2001/58/EC

mr-I 7000E Series Imprint Polymer

Print date : 15.12.2005

Product code : R341XXX

Page 5 of 6

Marine transport

IMDG code : 3
UN number : 1866
EmS : F-E, S-E
IMDG packing group : III
Hazard label : 3

Description of the goods

RESIN SOLUTION flammable

Air transport

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

Description of the goods

RESIN SOLUTION

15. Regulatory information

15.1 Labelling

Indication of danger : Xi - Irritant



Xi - Irritant

R phrases :

10 Flammable.
36 Irritating to eyes.

S phrases :

25 Avoid contact with eyes.

15.2 National regulations

Employment restrictions : Observe employment restrictions for young people.
Water contaminating class : 1 - slightly water contaminating

16. Other information

List of relevant R phrases

10 Flammable.
36 Irritating to eyes.

Other data

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Page 6 of 6

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.