

# Safety Data Sheet

according to Regulation (EU) No. 1907/2006

## LOR B Series Resist

Print date: 2.12.2010

Product code: MG3167XX

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

#### Identification of the substance or preparation

LOR B Series Resist

#### Use of the substance/preparation

Organic Polymer Solution

#### Company/undertaking identification

##### 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  
 e-mail: productsafety@microchem.com  
 Internet: www.microchem.com  
 Telefax: +1 617 965 5818

##### Supplier

Company name: micro resist technology GmbH  
 Street: Koepenicker Str. 325, Haus 211  
 Place: D-12555 Berlin  
 Telephone: +49 30 65762192  
 e-mail: mrt@microresist.de  
 Internet: www.microresist.de  
 Emergency telephone: Chemtrec (International): +1 703 527 3887  
 Telefax: +49 30 65762193

### 2. Hazards identification

#### Classification

Indications of danger : Irritant  
 R-phrases:  
 Flammable.  
 Irritating to eyes and skin.  
 Vapours may cause drowsiness and dizziness.

### 3. Composition/information on ingredients

#### Chemical characterization ( Mixture )

#### Hazardous components

| EC-No.    | CAS-No.  | Chemical name   | Quantity | Classification |
|-----------|----------|---|----------|----------------|
| 204-435-9 | 120-92-3 | cyclopentanone  | 65-90 %  | Xi R10-36/38   |
| 203-539-1 | 107-98-2 | 1-methoxy-2-propanol; monopropylene glycol methyl ether | 10-15 %  | R10-67         |

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

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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**

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**

Make affected person vomit if conscious. Rinse mouth thoroughly with water. Immediately get medical attention.

## 5. Fire-fighting measures

**Suitable extinguishing media**

Carbon dioxide (CO<sub>2</sub>). 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**

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.

**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. Heating causes rise in pressure with risk of bursting. Contaminated fire-fighting water must be collected separately.

## 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. Explosion hazard.

**Methods for cleaning up/taking 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.

## 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****Requirements for storage rooms and vessels**

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

**Further information on storage conditions**

Protect against: heat. UV-radiation/sunlight.

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Storageclass (VCI):

3

### 8. Exposure controls/personal protection

#### Exposure limit values

#### Exposure limits (EH40)

| CAS-No.  | Chemical name        | ml/m <sup>3</sup> | mg/m <sup>3</sup> | F/ml | Category      | Origin |
|----------|----------------------|-------------------|-------------------|------|---------------|--------|
| 107-98-2 | 1-Methoxypropan-2-ol | 100               | 375               |      | TWA (8 h)     | WEL    |
|          |                      | 150               | 560               |      | STEL (15 min) | WEL    |

#### 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

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: light yellow  
Odour: characteristic

#### Important health, safety and environmental information

Test method

##### Changes in the physical state

Boiling point: 120-130 °C  
Flash point: 30 °C TCC  
Lower explosion limits: 1,3 vol. %

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|                                |                               |
|--------------------------------|-------------------------------|
| Upper explosion limits:        | not determined                |
| Ignition temperature:          | 278 °C                        |
| Vapour pressure:<br>(at 20 °C) | 12 hPa                        |
| Density (at 25 °C):            | 0,965-1,007 g/cm <sup>3</sup> |
| Water solubility:              | partially miscible            |

**Other information****10. Stability and reactivity****Conditions to avoid**

UV-radiation/sunlight. heat. Remove all sources of ignition. Take precautionary measures against static discharges.

**Materials to avoid**

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

**Hazardous decomposition products**

Carbon monoxide. Carbon dioxide.

**Additional information**

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

**11. Toxicological information****Acute toxicity**

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

Acute toxicity, oral LD50: >5000 mg/kg species: Rat. (1-methoxy-2-propanol; monopropylene glycol methyl ether)

Acute toxicity, inhalant LC50: >19,5 mg/l /4 h species: Rat. (cyclopentanone)

Acute toxicity, inhalant LC50: >6 mg/l /4 h species: Rat. (1-methoxy-2-propanol; monopropylene glycol methyl ether)

**12. Ecological information****Ecotoxicity**

1-methoxy-2-propanol; monopropylene glycol methyl ether:

Acute fish toxicity LC50: 4600-10000 mg/l /96 h species: Leuciscus idus

Acute Daphnia toxicity EC50: >500 mg/l /48 h species: Daphnia magna

Algae toxicity IC50: >1000 mg/l /72 h species: Selenastrum capricornutum

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

**Bioaccumulative potential**

1-methoxy-2-propanol; monopropylene glycol methyl ether:

Distribution coefficient (n-octanol / water) (log P O/W): -0,437 Method: calculated.

Due to the n-octanol-water partition coefficient, a bio-accumulation in organisms is not to be expected.

cyclopentanone:

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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 |
| Tunnel restriction code: | D/E |

**Description of the goods**

Resin solution

**Other applicable information (land transport)**

Special provisions: 640E

Excepted Quantity: E1

Transport category: 3

**Inland waterways transport****Other applicable information (inland waterways transport)**

Not classified for this carrier.

**Marine transport**

|                   |      |
|-------------------|------|
| UN number:        | 1866 |
| IMDG code:        | 3    |
| Marine pollutant: | NO   |
| Hazard label:     | 3    |



|                     |          |
|---------------------|----------|
| IMDG packing group: | III      |
| EmS:                | F-E, S-E |
| Limited quantity:   | 5 L      |

**Description of the goods**

Resin solution

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**Other applicable information (marine transport)**

Special provisions: 223, 944, 955

Excepted Quantity: E1

**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

Special provisions: A3

**15. Regulatory information****Labelling**

Danger symbols: Xi - Irritant



Xi - Irritant

**R phrases**

- 10 Flammable.  
 36/38 Irritating to eyes and skin.  
 67 Vapours may cause drowsiness and dizziness.

**S phrases**

- 23 Do not breathe vapour .  
 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 37 Wear suitable gloves.  
 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**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: 82-98 % (830-940 g/l)

**National regulatory information**

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

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

- |       |   |
|-------|---|
| 10    | Flammable.                                  |
| 36/38 | Irritating to eyes and skin.                |
| 67    | Vapours may cause drowsiness and dizziness. |

**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.

**Changes**

Chapter: 1, 2, 3, 7, 15, 16

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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.)*