

Safety Data Sheet

according to Regulation (EU) No. 1907/2006

Developer mr-Dev 600

Print date: 23.03.2011

Product code: R815100

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

Product group: Entwickler

Identification of the substance or preparation

Developer mr-Dev 600

Use of the substance/preparation

Chemical Speciality

Company/undertaking identification

Company name: micro resist technology GmbH
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2. Hazards identification**Classification**

R-phrases:
 Flammable.

GHS: Hazard categories:
 Flammable liquid: Flam. Liq. 3
 Hazard Statements:
 Flammable liquid and vapour.

3. Composition/information on ingredients**Chemical characterization (Mixture)****Hazardous components**

EC-No.	Chemical name	Quantity
CAS-No.	Classification	
REACH-No.	GHS classification	
203-603-9	2-methoxy-1-methylethyl acetate	80-100%
108-65-6	R10	
	Flam. Liq. 3; H226	

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

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.

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After ingestion

Rinse mouth thoroughly with water. Let water be swallowed in little sips (dilution effect). Medical treatment necessary.

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.

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

Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches.

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 objects and areas thoroughly observing environmental regulations.

7. Handling and storage**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.

Advice on protection against fire and explosion

Take precautionary measures against static discharges.

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: heat. UV-radiation/sunlight.

Storageclass (VCI):

3

8. Exposure controls/personal protection**Exposure limit values**

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Exposure limits (EH40)

CAS-No.	Chemical name	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

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: NBR (Nitrile rubber).

Thickness of glove material: 0.4 mm

penetration time (maximum wearing period): > 30 min

Recommended protective gloves brand: 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).

Environmental exposure controls

Do not empty into drains. Explosion hazard.

9. Physical and chemical properties**General information**

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

Important health, safety and environmental information

Test method

Changes in the physical state

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Boiling point:	148-151 °C
Flash point:	48,0 °C
Lower explosion limits:	1,5 vol. %
Upper explosion limits:	10,8 vol. %
Ignition temperature:	315 °C
Vapour pressure:	3,1 hPa
(at 20 °C)	
Vapour pressure:	21 hPa
(at 50 °C)	
Density (at 20 °C):	0,97 g/cm ³
Water solubility:	not miscible
Viscosity / dynamic:	<7 mPa·s
(at 25 °C)	

Other information

Data apply to the principal component.

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. Take precautionary measures against static discharges.

Materials to avoid

Oxidizing agents. (Ignition hazard.)
Violent reaction with: Peroxides. Alkalis (alkalis).

11. Toxicological information**Acute toxicity**

2-methoxy-1-methylethyl acetate:
Acute toxicity, oral LD50: 8532 mg/kg species: Rat. (RTECS)
Acute toxicity, dermal LD50: 7500 mg/kg species: Rabbit.
The statement is derived from the properties of the components.

12. Ecological information**Ecotoxicity**

2-methoxy-1-methylethyl acetate:
Acute fish toxicity LC50: 161 mg/l/96h species: Pimephales promelas (IUCLID)
Acute Daphnia toxicity EC50: 408 mg/l/48h species: Daphnia magna (IUCLID)

Persistence and degradability

Biological degradation: Easily biodegradable (concerning to the criteria of the OECD)

Bioaccumulative potential

Distribution coefficient (n-octanol / water) (log P O/W): 0,56 at °C: 25 (literature value)
On the basis of existing data about disposal/decomposition and bio-accumulation potential, long term environmental damage is unlikely.

Further information

Do not allow uncontrolled leakage of product into the environment.

13. Disposal considerations**Advice on disposal**

Appropriate disposal / Product: Remove according to the regulations.

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Contaminated packaging: Cleaned containers may be recycled.

14. Transport information**Land transport (ADR/RID)**

UN number: 3272
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

ESTERS, N.O.S. (1-Methoxy-2-propyl acetate)

Other applicable information (land transport)

Special provisions: 274
Excepted Quantity: E1
Transport category: 3

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

Not classified for this carrier.

Marine transport

UN number: 3272
IMDG code: 3
Marine pollutant: •
Hazard label: 3



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

Description of the goods

ESTERS, N.O.S. (1-Methoxy-2-propyl acetate)

Other applicable information (marine transport)

Special provisions: 223, 274, 944
Excepted Quantity: E1

Air transport

UN/ID number: 3272
ICAO/IATA-DGR: 3
Hazard label: 3

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ICAO packing group:	III
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

Description of the goods

ESTERS, N.O.S. (1-Methoxy-2-propyl acetate)

Other applicable information (air transport)

Excepted Quantity: E1

Passenger-LQ: Y344

Special provisions: A3

15. Regulatory information**Chemical Safety Assessment**

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

Labelling**R phrases**

10 Flammable.

S phrases

16 Keep away from sources of ignition - No smoking.
 07/09 Keep container tightly closed and in a well-ventilated place.
 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

GHS labelling

Signal word: Warning

Pictograms: flame

**Hazard statements**

H226 Flammable liquid and vapour.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.

EU regulatory information

1999/13/EC (VOC):

Data concerning the Directive 1999/13/EC on the limitation of emissions of volatile organic compounds (VOC-RL): This chemical is a VOC according to 99/13/EC. VOC-value (in g/l): 100 % (970 g/l)

National regulatory information

Employment restrictions:

Observe employment restrictions for young people.

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Water contaminating class (D): 1 - slightly water contaminating

Additional information

Substance/Preparation is listed in the following national inventories: TSCA

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

10 Flammable.

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

H226 Flammable liquid and vapour.

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: 2, 3, 4, 5, 6, 7, 8, 10, 12, 14, 15

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