

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Developer mr-Dev 600

Print date: 01.05.2013

Product code: R815100

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### Product identifier

Developer mr-Dev 600

Product group: Entwickler

### 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

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:** +49 30 641670-100

### Further Information

This number is serviced during office hours.

## SECTION 2: Hazards identification

### Classification of the substance or mixture

R-phrases:  
Flammable.

### GHS classification

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

### Label elements

Signal word: Warning

Pictograms: GHS02



### Hazard statements

H226 Flammable liquid and vapour.

### Precautionary statements

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.  
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.

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 P370+P378  
P403+P235

 In case of fire: Use Extinguishing powder. Foam. Carbon dioxide (CO<sub>2</sub>). for extinction.  
Store in a well-ventilated place. Keep cool.

#### Other hazards

Flammable liquid and vapour.

### SECTION 3: Composition/information on ingredients

#### Mixtures

##### Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification	
Index No	GHS classification	
REACH No		
203-603-9	2-methoxy-1-methylethyl acetate	80-100%
108-65-6	R10	
607-195-00-7	Flam. Liq. 3; H226	

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

#### Extinguishing media

##### 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.

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#### Special hazards arising from the substance or mixture

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

#### Advice for firefighters

Wear a self-contained breathing apparatus and chemical resistant suit. Full protective suit.

### 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). Do not rinse down with water. Collect in closed containers for disposal. Clean contaminated objects and areas thoroughly observing environmental regulations.

#### 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.

##### **Further information on handling**

In case of fire, use sand, earth, extinguishing powder or foam. Never use water.

#### Conditions for safe storage, including any incompatibilities

##### **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. 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

##### **Exposure limits (EH40)**

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

##### **Additional advice on limit values**

No data available

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#### 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](http://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](http://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:	colourless - light yellow
Odour:	characteristic

#### **Test method**

pH-Value:	No data available
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**Changes in the physical state**

Melting point:	No data available
Boiling point:	148 °C
Flash point:	48 °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:	1,2 vol. %
Upper explosion limits:	10,6 vol. %
Ignition temperature:	315 °C
Vapour pressure: (at 20 °C)	5 hPa
Vapour pressure: (at 50 °C)	21 hPa
Density (at 20 °C):	0,97 g/cm <sup>3</sup>
Water solubility:	insoluble
Partition coefficient:	No data available
Viscosity / dynamic: (at 25 °C)	<7 mPa·s
Viscosity / kinematic:	No data available
Flow time:	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.

Keep away from heat. Keep away from sources of ignition - No smoking.

Ignition hazard.

**Incompatible materials**

Oxidizing agents. (Ignition hazard.)

Violent reaction with: Peroxides. Alkalis (alkalis).

**Hazardous decomposition products**

No data available

**SECTION 11: Toxicological information****Information on toxicological effects**

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#### 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.

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
108-65-6	2-methoxy-1-methylethyl acetate				
	oral	LD50	8532 mg/kg	Rat.	
	dermal	LD50	7500 mg/kg	Rabbit.	

#### Additional information on tests

No data available

### SECTION 12: Ecological information

#### Toxicity

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)

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	h	Species	Source
108-65-6	2-methoxy-1-methylethyl acetate					
	Acute fish toxicity	LC50	161 mg/l	96	Pimephales promelas	
	Acute crustacea toxicity	EC50	408 mg/l	48	Daphnia magna	

#### Persistence and degradability

Easily biodegradable (concerning to the criteria of the OECD)

#### Bioaccumulative potential

Distribution coefficient (n-octanol / water) (log P O/W): 0,43 at °C: 25 (literature value)

On the basis of existing data about disposal/decomposition and bio-accumulation potential, long term environmental damage is unlikely.

#### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
108-65-6	2-methoxy-1-methylethyl acetate	0,43

#### Mobility in soil

No data available

#### Results of PBT and vPvB assessment

No data available

#### Other adverse effects

No data available

#### Further information

Do not allow uncontrolled leakage of product into the environment.

### SECTION 13: Disposal considerations

#### Waste treatment methods

##### **Advice on disposal**

Do not empty into drains or the aquatic environment. Waste disposal according to official state

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regulations.

**Contaminated packaging**

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

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

**UN number:** UN3272  
**UN proper shipping name:** ESTERS, N.O.S. (1-Methoxy-2-propyl acetate)  
**Transport hazard class(es):** 3  
**Packing group:** III  
 Hazard label: 3



Classification code: F1  
 Special Provisions: 274  
 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:** UN3272  
**UN proper shipping name:** ESTERS, N.O.S. (1-Methoxy-2-propyl acetate)  
**Transport hazard class(es):** 3  
**Packing group:** III  
 Hazard label: 3



Special Provisions: 223, 274  
 Limited quantity: 5 L  
 EmS: F-E, S-D

**Other applicable information (marine transport)**

Excepted Quantity: E1

**Air transport**

**UN/ID number:** UN3272  
**UN proper shipping name:** ESTERS, N.O.S. (1-Methoxy-2-propyl acetate)  
**Transport hazard class(es):** 3  
**Packing group:** III  
 Hazard label: 3



Special Provisions: A3

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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

**Environmental hazards**

Dangerous for the environment: no

**Special precautions for user**

No data available

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

not applicable

**SECTION 15: Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

1999/13/EC (VOC): 80-100 %

**National regulatory information**

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

Water contaminating class (D): 1 - slightly 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; 4; 5; 6; 7; 8; 9; 10; 11; 12; 13; 14; 15; 16

**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 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.)*