

Safety Data Sheet

according to WHMIS

Developer mr-Dev 600

Revision date: 01.01.2022

Product code: mr-Dev_600

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1. Identification

Product identifier

Developer mr-Dev 600

Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

Developer liquid

Product Categories [PC] 30: Photochemical

Sector of uses [SU] 16: Manufacture of computer, electronic and optical products, electrical equipment.

Uses advised against

Do not use for private purposes (household).

Details of the supplier of the safety data sheet

Company name: micro resist technology GmbH

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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 number: Chemtrec (International - 24 h): +1 703 527 3887

2. Hazard identification

Classification of the substance or mixture

WHMIS 2015

Flammable liquid: Flam. Liq. 3

Specific target organ toxicity - single exposure: STOT SE 3 (narcotic effects)

Label elements

WHMIS 2015

Signal word: Danger

Pictograms:



Hazard statements

Flammable liquid and vapour.

May cause drowsiness or dizziness.

May damage fertility or the unborn child.

Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep container tightly closed.

Ground and bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use non-sparking tools.

Take action to prevent static discharges.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

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IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor if you feel unwell.
IF exposed or concerned: Get medical advice/attention.
In case of fire: Use Foam, Extinguishing powder, Carbon dioxide to extinguish.
Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container to an appropriate recycling or disposal facility.

Other hazards

No information available.

3. Composition/information on ingredients

Substances

Hazardous components

CAS No	Chemical name	Quantity
108-65-6	2-methoxy-1-methylethyl acetate	> 99 %
70657-70-4	2-methoxypropyl acetate	< 0,3 %

4. First-aid measures

Description of first aid measures

General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or 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 respiratory tract irritation, consult a physician.

After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse. 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

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink plenty of water.

Medical treatment necessary.

Most important symptoms and effects, whether acute or delayed

No data available

Indication of immediate medical attention and special treatment needed

Treat symptomatically. Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂), alcohol resistant foam, Extinguishing powder, Water spray.

Unsuitable extinguishing media

Water. High power water jet.

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Specific hazards arising from the hazardous product

Flammable. Vapours can form explosive mixtures with air. In case of fire and/or explosion do not breathe fumes.

Special protective equipment and precautions for fire-fighters

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

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures****General advice**

Remove all sources of ignition.

Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Danger of explosion Do not allow to enter into surface water or drains.

Methods and material for containment and cleaning up**Other information**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal. Absorb with liquid-binding material (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.

Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13 Treat the recovered material as prescribed in the section on waste disposal.

See protective measures under point 7 and 8.

7. Handling and storage**Precautions for safe handling****Advice on safe handling**

Use only in well-ventilated areas. Only use the material in places where open light, fire and other flammable sources can be kept away. Do not breathe vapour/aerosol.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air. Take precautionary measures against static discharges.

Advice on general occupational hygiene

Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat or drink.

Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints on joint storage

Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances.

Further information on storage conditions

Protect against: heat.

8. Exposure controls/Personal protection

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Control parameters

Additional advice on limit values

No data available

Exposure controls



Appropriate engineering controls

Wear personal protection equipment. Provide adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye/face protection. Suitable eye protection: Tightly sealed safety glasses.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Tested protective gloves are to be worn: Single-use gloves.

German Industry Norms (DIN) / European Norms (EN): EN ISO 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

Wearing time 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

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Wear suitable protective clothing. For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes).

Respiratory protection

In case of inadequate ventilation wear respiratory protection. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Respiratory protection necessary at: aerosol or mist generation. Filtering device (full mask or mouthpiece) with filter: a

Environmental exposure controls

Do not empty into drains.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state:

liquid

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Colour:	colourless - light yellow
Odour:	characteristic
Melting point/freezing point:	> -67 °C
Boiling point or initial boiling point and boiling range:	148 °C
Flammability:	not applicable
	not applicable
Lower explosive limits:	1,2 vol. %
Upper explosive limits:	10,6 vol. %
Flash point:	48 °C
Auto-ignition temperature:	315 °C
Decomposition temperature:	not determined
pH-Value:	No data available
Viscosity / kinematic:	No data available
Water solubility: (at 20 °C)	190 g/L
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	No data available
Vapour pressure: (at 20 °C)	5 hPa
Vapour pressure: (at 50 °C)	21 hPa
Density (at 20 °C):	0,97 g/cm ³
Relative vapour density:	No data available

Other information

Information with regard to physical hazard classes

Explosive properties

The product is: not explosive.

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

Self-ignition temperature

Solid:

not applicable

Gas:

not applicable

Oxidizing properties

Not oxidising.

Other safety characteristics

Evaporation rate:

No data available

Solid content:

not determined

Viscosity / dynamic:

<7 mPa·s

(at 25 °C)

Flow time:

No data available

Further Information

No data available

10. Stability and reactivity

Reactivity

Flammable.

Chemical stability

The product is stable under storage at normal ambient temperatures.

Possibility of hazardous reactions

No known hazardous reactions.

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Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air. UV-radiation/sunlight.
Keep away from sources of ignition - No smoking.

Incompatible materials

Oxidizing agents. (Ignition hazard.)

Hazardous decomposition products

No known hazardous decomposition products.

11. Toxicological information

Information on toxicological effects

Acute toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name				
	Route of exposure	Dose	Species	Source	Method
108-65-6	2-methoxy-1-methylethyl acetate				
	oral	LD50 mg/kg	8532	Rat	RTECS
	dermal	LD50 mg/kg	7500	Rabbit	
	inhalation (4 h) dust/mist	LC50	8,1 mg/l	Rat	

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitizing effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

May damage fertility or the unborn child. (2-methoxypropyl acetate)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

STOT-single exposure

May cause drowsiness or dizziness. (2-methoxy-1-methylethyl acetate)

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

inhalation, ingestion, skin contact, eye contact

Information on other hazards

Endocrine disrupting properties

No data available

Name of toxicologically synergistic products

No data available

12. Ecological information

Persistence and degradability

Easily biodegradable (concerning to the criteria of the OECD)

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Mobility in soil

No data available

Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

No data available

Other adverse effects

No data available

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Do not allow uncontrolled leakage of product into the environment.

13. Disposal considerations

Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Delivery to an approved waste disposal company.

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

14. Transport information

Canadian TDG

UN number:

UN 3272

Proper shipping name:

ESTERS, N.O.S. (2-methoxy-1-methylethyl acetate)

Hazard classes:

3

Packing group:

III

Hazard label:

3

Limited quantity:

5 L



Marine transport (IMDG)

UN number or ID number:

UN 3272

United Nations proper shipping name:

ESTERS, N.O.S. (2-methoxy-1-methylethyl acetate)

Transport hazard class(es):

3

Packing group:

III

Hazard label:

3



Special Provisions:

223, 274

Limited quantity:

5 L

Excepted quantity:

E1

EmS:

F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

UN number or ID number:

UN 3272

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United Nations proper shipping

ESTERS, N.O.S. (2-methoxy-1-methylethyl acetate)

name:

Transport hazard class(es):

3

Packing group:

III

Hazard label:

3



Special Provisions:

A3

Limited quantity Passenger:

10 L

Passenger LQ:

Y344

Excepted quantity:

E1

IATA-packing instructions - Passenger:

355

IATA-max. quantity - Passenger:

60 L

IATA-packing instructions - Cargo:

366

IATA-max. quantity - Cargo:

220 L

Environmental hazards

ENVIRONMENTALLY HAZARDOUS:

No

15. Regulatory information

Canadian regulations

16. Other information

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations. 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.