

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No 2015/830



E-Beam Resists AR-P 6510

Revision date: 24/2/2016

Version: 7

Language: en-GB,IE

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

1.1 Product identifier

Trade name: E-Beam Resists AR-P 6510

REACH registration No.: -

CAS-Number: 108-65-6

EC-number: 203-603-9

EU index number: 607-195-00-7

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

General use: Intermediate for electronic industry

1.3 Details of the supplier of the safety data sheet

Company name: Allresist
Gesellschaft für chemische Produkte zur Mikrostrukturierung mbH

Street/POB-No.: Am Biotop 14

Postal Code, city: 15344 Strausberg
Germany

WWW: www.allresist.de

E-mail: info@allresist.de

Telephone: +49 (0)33 41-35 93-0

Telefax: +49 (0)33 41-35 93-29

Dept. responsible for information:
Frau Feldt, Email: doerte.feldt@allresist.de

1.4 Emergency telephone number

Telephone: +49 (0)33 41-35 93-0
Only available during office hours.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)

Flam. Liq. 3; H226 Flammable liquid and vapour.

2.2 Label elements

Labelling (CLP)



Signal word: **Warning**

Hazard statements: H226 Flammable liquid and vapour.

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Precautionary statements:

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P243 Take precautionary measures against static discharge.
- P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P403+P235 Store in a well-ventilated place. Keep cool.

2.3 Other hazards

On contact with air, potentially explosive mixtures may develop.

SECTION 3: Composition / information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Hazardous ingredients:

Ingredient	Designation	Content	Classification
EC No. 203-603-9 CAS 108-65-6	2-Methoxy-1-methylethyl acetate	> 80 %	CLP: Flam. Liq. 3; H226

SECTION 4: First aid measures

4.1 Description of first aid measures

- In case of inhalation: Move victim to fresh air, put at rest and loosen restrictive clothing. Seek medical aid in case of troubles.
- Following skin contact: Change contaminated clothing. Remove residues with soap and water. In case of skin irritation, consult a physician.
- After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.
- After swallowing: Rinse mouth immediately and drink plenty of water. Do not induce vomiting. Seek medical attention.

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4.2 Most important symptoms and effects, both acute and delayed

Systemic effects: Drowsiness, cyanosis (blue coloured blood), unconsciousness, narcosis. damage of kidneys.
During animal experiments no indications of reproductive toxicity were observed.
In case of inhalation:
central nervous system depression, Cough and shortage of breath. Pulmonary edema is possible. Symptoms may occur with delay.
Vapours > 100 ppm: irritant.
If higher concentrations occur: strongly irritant.
In case of ingestion: Nausea, vomiting, central nervous system depression.
Aspiration hazard: in case of swallowing or vomiting danger of penetration into the lungs.
After contact with skin:
Prolonged/repetitive skin contact may cause skin defatting or dermatitis.
Danger of cutaneous absorption.
After eye contact: May cause irritations.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Extinguishing powder, water fog or carbon dioxide.
In case of large fires: Alcohol resistant foam or water fog.

Extinguishing media which must not be used for safety reasons:

High power water jet

5.2 Special hazards arising from the substance or mixture

Flammable liquid and vapour. On contact with air, potentially explosive mixtures may develop.
May form dangerous gases and vapours in case of fire. Carbon monoxide and carbon dioxide.

5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information:

Hazchem-Code: •3Y

Cool endangered containers with water spray and, if possible, remove from danger zone.
Do not allow fire water to penetrate into surface or ground water.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Wear suitable protective clothing.
Do not breathe vapours. Avoid contact with the substance.
In enclosed areas: Provide fresh air.

6.2 Environmental precautions

Do not allow to enter into ground-water, surface water or drains.
If necessary notify appropriate authorities.

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6.3 Methods and material for containment and cleaning up

Take up with non-flammable, liquid binding material (e.g. sand/earth/diatomaceous earth/vermiculit) and perform disposal according to instructions. Wash spill area with plenty of water.

In case of spills of large quantities: Dam spills.

6.4 Reference to other sections

Refer additionally to section 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed.

Do not breathe vapours. Avoid contact with skin, eyes, and clothing.

Precautions against fire and explosion:

Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharges. Use grounding equipment. Use only spark proof tools. Do not weld.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Keep container tightly closed in a cool, well-ventilated place.

Keep away from sources of ignition and heat.

Qualified materials: steel, polypropylene.

Unsuitable materials: Copper, zinc.

storage temperature 10-22 °C.

Storage class:

3 = Flammable liquids

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

Type	Limit value
Europe: IOELV: STEL	550 mg/m ³ ; 100 ppm (May be absorbed through the skin.)
Europe: IOELV: TWA	275 mg/m ³ ; 50 ppm (May be absorbed through the skin.)
Great Britain: WEL-STEEL	548 mg/m ³ ; 100 ppm
Great Britain: WEL-TWA	274 mg/m ³ ; 50 ppm
Ireland: 15 minutes	550 mg/m ³ ; 100 ppm (May be absorbed through the skin.)
Ireland: 8 hours	275 mg/m ³ ; 50 ppm (May be absorbed through the skin.)

8.2 Exposure controls

When aerosols and vapours form: Withdraw by suction.

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Personal protection equipment

Occupational exposure controls

- Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded. Use filter type A (= against vapours of organic substances) according to EN 14387.
- Hand protection: Protective gloves according to EN 374.
Glove material: butyl caoutchouc (butyl rubber)-Layer thickness: 0,7 mm.
Breakthrough time: >480 min.
Unsuitable materials: natural rubber, nitrile rubber.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
- Eye protection: Tightly sealed goggles according to EN 166.
- Body protection: Wear suitable protective clothing.
- General protection and hygiene measures:
Change contaminated clothing.
Wash hands before breaks and after work.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance: Form: liquid
Colour: colourless, clear
- Odour: characteristic, ester-like
- Odour threshold: no data available
- pH value: at 20 °C, 200 g/L: 4 g/L
- Melting point/freezing point: -66 °C
- Initial boiling point and boiling range: 146 °C
- Flash point/flash point range: 42 °C (ASTM D3278)
- Evaporation rate: no data available
- Flammability: Flammable liquid and vapour.
- Explosion limits: LEL (Lower Explosion Limit): 1.50 Vol-%
UEL (Upper Explosive Limit): 7.00 Vol-%
- Vapour pressure: at 25 °C: 5.17 hPa
at 50 °C: 21 hPa
- Vapour density: no data available
- Density: at 20 °C: 0.965 - 0.967 g/mL
- Water solubility: at 20 °C: 198 g/L
- Partition coefficient: n-octanol/water: 0.43 log P(o/w)
Bio-accumulation is not to be expected (log P(o/w) <1).
- Auto-ignition temperature: 333 °C
- Thermal decomposition: no data available
- Viscosity, dynamic: no data available
- Viscosity, kinematic: at 20 °C: 1.23 mm²/s
at 25 °C: 1.13 mm²/s
- Explosive properties: no data available
- Oxidizing characteristics: no data available

9.2 Other information

- Ignition temperature: 315 °C

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Additional information:

Molar mass: 132.16 g/mol

Relative vapour density at 20 °C (air=1): 4.6

SECTION 10: Stability and reactivity

10.1 Reactivity

Flammable liquid and vapour. On contact with air, potentially explosive mixtures may develop.

Hygroscopic.

10.2 Chemical stability

Stabiliser: 2,6-di-tert.-Butyl-4-methylphenol

10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4 Conditions to avoid

Keep away from heat. Protect from direct sunlight. Protect from moisture contamination.

10.5 Incompatible materials

Oxidising agent, alkalis.

10.6 Hazardous decomposition products

In case of fire may be liberated: Carbon monoxide and carbon dioxide.

Thermal decomposition: no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

LD50 Rat, oral: 6190 mg/kg (OECD 401)

LD50 Rabbit, dermal: > 5000 mg/kg (OECD 402)

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Toxicological effects:

- Acute toxicity (oral): Based on available data, the classification criteria are not met.
- Acute toxicity (dermal): Based on available data, the classification criteria are not met.
- Acute toxicity (inhalative): Based on available data, the classification criteria are not met.
- Skin corrosion/irritation: Based on available data, the classification criteria are not met.
- Eye damage/irritation: Based on available data, the classification criteria are not met.
- Sensitisation to the respiratory tract: Based on available data, the classification criteria are not met.
- Skin sensitisation: Based on available data, the classification criteria are not met.
- Germ cell mutagenicity/Genotoxicity: Lack of data.
- Carcinogenicity: Based on available data, the classification criteria are not met.
- Reproductive toxicity: Based on available data, the classification criteria are not met.
- Effects on or via lactation: Based on available data, the classification criteria are not met.
- Specific target organ toxicity (single exposure): Based on available data, the classification criteria are not met.
- Specific target organ toxicity (repeated exposure): Based on available data, the classification criteria are not met.
- Aspiration hazard: Based on available data, the classification criteria are not met.

Symptoms

Systemic effects: Drowsiness, cyanosis (blue coloured blood), unconsciousness, narcosis. damage of kidneys.
During animal experiments no indications of reproductive toxicity were observed.
In case of inhalation:
central nervous system depression, Cough and shortage of breath. Pulmonary edema is possible. Symptoms may occur with delay.
Vapours > 100 ppm: irritant.
If higher concentrations occur: strongly irritant.
In case of ingestion: Nausea, vomiting, central nervous system depression.
Aspiration hazard: in case of swallowing or vomiting danger of penetration into the lungs.
After contact with skin:
Prolonged/repetitive skin contact may cause skin defatting or dermatitis.
Danger of cutaneous absorption.
After eye contact: May cause irritations.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

- Daphnia toxicity:
EC50 Daphnia magna (Big water flea): > 500 mg/L/48
- Fish toxicity:
LC50 Oncorhynchus mykiss: 134 mg/L/96h (OECD 203)

12.2. Persistence and degradability

Further details:

- Biodegradation:
100 %/8 d (OECD 302 B).
57.4 %/20 d (closed bottle test).

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Oxygen demand:

BSB5: 330 mg/g

CSB: 1520 mg/kg

DOC: 523 mg/g

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:

0.43 log P(o/w)

Bio-accumulation is not to be expected (log P(o/w) <1).

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

General information: Do not allow to enter into ground-water, surface water or drains.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 07 01 04* = organic solvents, halogen-free

* = Evidence for disposal must be provided.

Recommendation: Incinerate as hazardous waste according to applicable local, state, and federal regulations.

Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation. Handle contaminated packages in the same way as the substance itself.
Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number

ADR/RID, IMDG, IATA: UN 1993

14.2 UN proper shipping name

ADR/RID, IMDG, IATA: UN 1993, FLAMMABLE LIQUID, N.O.S. (2-Methoxy-1-methylethyl acetate solution)

14.3 Transport hazard class(es)

ADR/RID: Class 3, Code: F1

IMDG: Class 3, Subrisk -

IATA: Class 3

14.4 Packing group

ADR/RID, IMDG, IATA: III



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14.5 Environmental hazards

Marine pollutant: No

14.6 Special precautions for user

Land transport (ADR/RID)

Warning board: ADR/RID: Kemmler-number 30, UN number 1993
Hazard label: 3
Special provisions: 274
Limited quantities: 5L
EQ: E1
Contaminated packaging - Instructions: P001 IBC03 LP01 R001
Special provisions for packing together: MP19
Portable tanks - Instructions: T4
Portable tanks - Special provisions: TP1 TP29
Tank coding: LGBF
Tunnel restriction code: D/E

Sea transport (IMDG)

EmS: F-E, S-D
Special provisions: 223, 274
Limited quantities: 5L
EQ: E1
Contaminated packaging - Instructions: P001, LP01
Contaminated packaging - Provisions: -
IBC - Instructions: IBC03
IBC - Provisions: -
Tank instructions - IMO: -
Tank instructions - UN: T4
Tank instructions - Provisions: TP1, TP29
Stowage and handling: Category A.
Properties and observations: -

Air transport (IATA)

Hazard: Flammable liquid
EQ: E1
Passenger Ltd.Qty.: Pack.Instr. Y344 - Max. Net Qty/Pkg. 10 L
Passenger: Pack.Instr. 355 - Max. Net Qty/Pkg. 60 L
Cargo: Pack.Instr. 366 - Max. Net Qty/Pkg. 220 L
Special Provisioning: A3
ERG: 3L

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

no data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations - Great Britain

Hazchem-Code: •3Y

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National regulations - EC member states

Volatile organic compounds (VOC):

80 % by weight

Labelling of packaging with <= 125mL content



Signal word:

Warning

Hazard statements: not applicable

Precautionary statements:
not applicable

15.2 Chemical Safety Assessment

no data available

SECTION 16: Other information

Further information

Reason of change: General revision (Regulation (EU) Nr. 2015/830)

Date of first version: 18/8/2010

Department issuing data sheet

Contact person: see section 1: Dept. responsible for information

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.