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

1.1 Product identifier

Product number: 697377

Product name: AZ 9260 Photoresist (520 CPS)

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

Identified uses: Materials for use in technical applications

1.3 Details of the supplier of the safety data sheet

Company: Merck KGaA * 64271 Darmstadt * Germany * Phone:+49 6151 72-0

Responsible Department: PM-OQR * e-mail: PM_SDS_Supply@merckgroup.com

1.4 Emergency telephone number

Please contact the regional company representation in your country.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 3 H226: Flammable liquid and vapour.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms: 

Signal word: Warning

Hazard statements: H226 Flammable liquid and vapour.

Precautionary statements: Prevention:

P210 Keep away from heat.

2.3 Other hazards

None known.

SECTION 3: Composition/information on ingredients
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

AZ 9260 Photoresist (520 CPS)

3.1 Substance
Not applicable

3.2 Mixtures

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Chemical name</th>
<th>CAS-No. Registration number</th>
<th>Classification</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2-methoxypropyl acetate</td>
<td>2-Methoxypropyl acetate-1</td>
<td>Flam. Liq. 3; H226</td>
<td>&gt;= 0,1 - &lt; 0,3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Repr. 1B; H360D</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT SE 3; H335</td>
<td></td>
</tr>
<tr>
<td>Substances with a workplace exposure limit</td>
<td>2-methoxy-1-methylethyl acetate</td>
<td>108-65-6 01-2119475791-29-xxxx</td>
<td>Flam. Liq. 3; H226</td>
<td>&gt;= 50 - &lt;= 100</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1 Description of first aid measures
If inhaled: fresh air.
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.
In case of eye contact: rinse out with plenty of water. Remove contact lenses.
If swallowed: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed
Symptoms: We have no description of any toxic symptoms.

4.3 Indication of any immediate medical attention and special treatment needed
Treatment: No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media: Water, Foam, Carbon dioxide (CO2), Dry powder.
5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting: Combustible.

Vapours are heavier than air and may spread along floors. Forms explosive mixtures with air at elevated temperatures. Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.

Further information: Cool closed containers exposed to fire with water spray. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Advice for non-emergency personnel:
- Do not breathe vapours, aerosols.
- Ensure adequate ventilation.
- Keep away from heat and sources of ignition.
- Evacuate the danger area, observe emergency procedures, consult an expert.
- Advice for emergency responders:
  - Protective equipment see section 8.

6.2 Environmental precautions

Environmental precautions: Do not flush into surface water or sanitary sewer system. Risk of explosion.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up: Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

Indications about waste treatment see section 13.
SECTION 7: Handling and storage

7.1 Precautions for safe handling
Advice on safe handling : Observe label precautions.
Advice on protection against fire and explosion : Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.
Hygiene measures : Change contaminated clothing. Wash hands after working with substance.

7.2 Conditions for safe storage, including any incompatibilities
Requirements for storage areas and containers : Store in original container.
Further information on storage conditions : Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Protected from light.
Risks from decomposition products: see section 10.3
Recommended storage temperature : Recommended storage temperature see product label.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Engineering measures
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
See section 7.1.

Personal protective equipment
Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled and must meet the specifications of a standard EN/ISO/DIN. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye protection : Safety glasses

Hand protection :
splash contact

Glove material : Nitrile rubber

Glove thickness : 0.4 mm

Break through time : > 10 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example: KCL 730 Camatri®-Velours (splash contact).

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Protective measures : Flame retardant antistatic protective clothing.

Respiratory protection : required when vapours/aerosols are generated.

Recommended Filter type: ABEK-filter

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.

Risk of explosion.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>yellow to red</td>
</tr>
<tr>
<td>Odour</td>
<td>ether-like</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>No information available.</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting point</td>
<td>No information available.</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>134 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>40 °C</td>
</tr>
</tbody>
</table>

Method: DIN 51755 (closed cup)
Evaporation rate: No information available.

Flammability (solid, gas): Not applicable

Lower explosion limit: No information available.

Upper explosion limit: No information available.

Vapour pressure: ca. 3 mbar
   Method: (calculated)

Relative vapour density: No information available.

Density: 1.07 g/cm³ at 25 °C

Solubility(ies): No information available.

Water solubility: partly soluble - phase separation

Partition coefficient: n-octanol/water: No information available.

Auto-ignition temperature: The substance or mixture is not classified as self heating.

Decomposition temperature: No information available.

Viscosity, kinematic: No information available.

Explosive properties: No information available.

Oxidizing properties: No information available.

9.2 Other data

None

SECTION 10: Stability and reactivity

10.1 Reactivity

Vapour/air-mixtures are explosive at intense warming.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Hazardous reactions: Risk of explosion with:
   fuming sulfuric acid
   Nitric acid
   silver
   perchlorates
   nitrogen dioxide
   nonmetallic halides
10.4 Conditions to avoid

Conditions to avoid: Heating. Exposure to light.

10.5 Incompatible materials

Materials to avoid: no information available

10.6 Hazardous decomposition products

no information available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity: No data available
Acute inhalation toxicity: No data available
Acute dermal toxicity: No data available

Components:

2-methoxypropyl acetate:

Acute oral toxicity: No data available
Acute inhalation toxicity: No data available
Acute dermal toxicity: No data available

2-methoxy-1-methylethyl acetate:

Acute oral toxicity: LD50 (Rat): 8.532 mg/kg
Remarks: (RTECS)
Acute inhalation toxicity: No data available
Acute dermal toxicity: No data available

Skin corrosion/irritation

Product:
No data available

Components:

2-methoxy-1-methylethyl acetate:
Species: Rabbit
Exposure time: 24 h
Method: OECD Test Guideline 404
Result: No irritation

Serious eye damage/eye irritation

Product:
No data available

Components:

2-methoxy-1-methylethyl acetate:
Species: Rabbit
Method: OECD Test Guideline 405
Result: No eye irritation

Respiratory or skin sensitisation

Product:
No data available

Components:

2-methoxy-1-methylethyl acetate:
Test Type: Maximisation Test
Exposure routes: dermal
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.

Germ cell mutagenicity

Product:
No data available

Components:

2-methoxy-1-methylethyl acetate:
Genotoxicity in vitro: Test Type: Ames test
    Species: Salmonella typhimurium
    Metabolic activation: with and without metabolic activation
    Method: OECD Test Guideline 471
    Result: negative
Carcinogenicity

Product:
This information is not available.

Components:
This information is not available.

Reproductive toxicity

Product:
No data available

Components:
2-methoxypropyl acetate:
Effects on fertility : 
Effects on foetal development : No data available 
Reproductive toxicity - Assessment : May damage the unborn child.

STOT - single exposure

Product:
No data available

Components:
2-methoxypropyl acetate:
Exposure routes: Inhalation 
Assessment: May cause respiratory irritation.

STOT - repeated exposure

Product:
No data available

Components:
No data available

Repeated dose toxicity

Product:
No data available

Components:
No data available

Aspiration toxicity

Product:
No data available
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AZ 9260 Photoresist (520 CPS)

Version: 1.0
Product number: 697377
Date of first issue: 19.10.2017
Print Date: 05.02.2018

Components:
No data available

11.2 Other information

Product:
Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

12.1 Toxicity

Product:
No data available

Components:

2-methoxypropyl acetate:
No data available

2-methoxy-1-methylethyl acetate:
Toxicity to fish
: LC50 (S. gairdnerii): 100 - 180 mg/l
  Exposure time: 96 h
  Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates:
: EC50 (Daphnia magna (Water flea)): 373 mg/l
  Exposure time: 48 h
  Method: OECD Test Guideline 202

Toxicity to algae:
: EC50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l
  Exposure time: 96 h
  Method: OECD Test Guideline 201

Toxicity to microorganisms:
: EC10 (activated sludge): > 1,000 mg/l
  Exposure time: 30 min
  Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity):
: NOEC: 47.5 mg/l
  Exposure time: 14 d
  Species: Oryzias latipes (Orange-red killifish)
  Method: OECD Test Guideline 204

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
: NOEC: >= 100 mg/l
  Exposure time: 21 d
  Species: Daphnia magna (Water flea)
  Test Type: semi-static test
  Method: OECD Test Guideline 211

12.2 Persistence and degradability

Product:
No data available
SAFETY DATA SHEET
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AZ 9260 Photoresist (520 CPS)

Components:

2-methoxypropyl acetate:
No data available

2-methoxy-1-methylethyl acetate:
Biodegradability: Result: Readily eliminated from water
Biodegradation: 100 %
Exposure time: 8 d
Method: OECD Test Guideline 302B

Biochemical Oxygen Demand (BOD):
: 330 mg/g
Incubation time: 5 d
Remarks: (IUCLID)

Chemical Oxygen Demand (COD):
: 1.740 mg/g
Remarks: (IUCLID)

ThOD:
: 1.820 mg/g
Remarks: (IUCLID)

12.3 Bioaccumulative potential

Product:
No data available

Components:

2-methoxypropyl acetate:
No data available

2-methoxy-1-methylethyl acetate:
Partition coefficient: n-octanol/water:
: log Pow: 1.2 (20 °C)
Method: OECD Test Guideline 117
Remarks: Bioaccumulation is not expected.

12.4 Mobility in soil

Product:
No data available

Components:

2-methoxypropyl acetate:
No data available

2-methoxy-1-methylethyl acetate:
No data available

12.5 Results of PBT and vPvB assessment

Product:
Assessment: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of...
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

AZ 9260 Photoresist (520 CPS)

Components:
2-methoxypropyl acetate:
No data available
2-methoxy-1-methylethyl acetate:
Assessment: Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

12.6 Other adverse effects

Product:
Additional ecological information: Discharge into the environment must be avoided.

Components:
2-methoxypropyl acetate:
No data available
2-methoxy-1-methylethyl acetate:
No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Product: See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

Air transport(IATA)
14.1. UN/ID No.: UN 1993
14.2. Proper shipping name: Flammable liquid, n.o.s. (2-Methoxy-1-methylethyl acetate)
14.3. Class: 3
14.4. Packing group: III
14.5 Environmentally hazardous: --
14.6 Special precautions for user: no

Sea transport(IMDG)
14.1. UN number: UN 1993
14.2. Proper shipping name: FLAMMABLE LIQUID, N.O.S.
SECTION 15: Regulatory information

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

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : 2-methoxypropyl acetate


<table>
<thead>
<tr>
<th>P5c</th>
<th>FLAMMABLE LIQUIDS</th>
<th>Quantity 1</th>
<th>Quantity 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>5.000 t</td>
<td>50.000 t</td>
</tr>
</tbody>
</table>

Storage class : 3

Volatile organic compounds : Volatile organic compounds (VOC) content: 620 g/l
SAFETY DATA SHEET
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AZ 9260 Photoresist (520 CPS)

Other regulations : Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical safety assessment
For this product a chemical safety assessment was not carried out.

SECTION 16: Other information

Training advice
Provide adequate information, instruction and training for operators.

Full text of H-Statements

H226 : Flammable liquid and vapour.
H335 : May cause respiratory irritation.
H360D : May damage the unborn child.

Key or legend to abbreviations and acronyms used in the safety data sheet
The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.