



**AZ 4533 Photoresist 0005**

Substance No.: SXR081512  
Version 22

Revision Date 23.03.2011

Print Date 22.07.2011

**1. Identification of the substance/mixture and of the company/undertaking**

**1.1 Product identifier**

Trade name : AZ 4533 Photoresist 0005

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

Use of the Substance/Mixture : Electronic industry  
Intermediate for electronic industry

**1.3 Details of the supplier of the safety data sheet**

Company : AZ Electronic Materials (Germany) GmbH  
Rheingaustrasse 190-196 ,  
65203 Wiesbaden Germany

Telephone : +49 (0)611 962 8563

E-mail address : [PSE@az-em.com](mailto:PSE@az-em.com)

Responsible/issuing person : Product Safety:  
+49(0)6126-229248 or +49(0)6126-227340

**1.4 Emergency telephone number**

Emergency telephone number : +49 69 305 6418

**2. Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification (REGULATION (EC) No 1272/2008)**

**GHS Classification**

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

**Classification (67/548/EEC, 1999/45/EC)**

Flammable R10: Flammable.

**2.2 Label elements**

**GHS-Labeling**

Symbol(s) :





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Signal word : Warning

Hazard statements : H226 Flammable liquid and vapour.

Precautionary statements : **Prevention:**  
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P233 Keep container tightly closed.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**  
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

**Storage:**  
P403 + P235 Store in a well-ventilated place. Keep cool.

**Labelling according to EC Directives**

**1999/45/EC**

R-phrases : R10 Flammable.

S-phrases : S16 Keep away from sources of ignition - No smoking.  
S60 This material and its container must be disposed of as hazardous waste.

Hazardous components which must be listed on the label:

- 108-65-6 2-methoxy-1-methylethyl acetate

**2.3 Other hazards**

No information available.

**3. Composition/information on ingredients**

**3.2 Mixtures**

**Chemical characterization**

A mixture of polymer resins and diazo compounds in a halogen free organic solvent.

**'Hazardous components**

WEL substance :

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### 2-methoxy-1-methylethyl acetate

CAS-No. : 108-65-6  
EC-No. : 203-603-9

Classification(67/548/EEC) : R10

Classification : Flam. Liq. 3; H226  
(REGULATION (EC) No  
1272/2008)  
Concentration [%] :  $\geq 50 - \leq 100$

For the full text of the R-phrases mentioned in this Section, see Section 16.  
For the full text of the H-Statements mentioned in this Section, see Section 16.

## 4. First aid measures

### 4.1 Description of first aid measures

- General advice : Remove soiled or soaked clothing immediately  
If someone exposed to the product feels unwell, contact a doctor and show this safety data sheet.  
Adhere to personal protective measures when giving first aid
- Inhalation : Remove the casualty into fresh air and keep him calm.  
Call in a physician immediately and show him the Safety Data Sheet.
- Skin contact : In case of contact with skin wash off immediately with polyethylene glycol 400, then with plenty of water  
If polyethylene glycol is not available, rinse off with plenty of water.
- Eye contact : Rinse immediately with gently running water for 15 minutes, maintaining eyelids open. Consult at once an ophthalmologist or a physician.
- Ingestion : Do NOT induce vomiting.  
Call in a physician immediately and show him the Safety Data Sheet.  
If conscious, drink plenty of water.

### 4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically.



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**5. Fire-fighting measures**

**5.1 Extinguishing media**

Suitable extinguishing media : water spray jet  
foam  
dry powder  
carbon dioxide

**5.2 Special hazards arising from the substance or mixture**

Specific hazards during fire fighting : In case of fires, hazardous combustion gases are formed:  
Carbon monoxide (CO)  
Nitrous gases (NOx)  
Sulphur dioxide (SO2)

**5.3 Advice for firefighters**

Special protective equipment for fire-fighters : Well closed full protective clothing (coat and pants) including helmet.  
Use self-contained breathing apparatus

Further information : Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

**6. Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions : See: Exposure controls and personal protection.

**6.2 Environmental precautions**

Environmental precautions : Do not allow entry to drains, water courses or soil

**6.3 Methods and materials for containment and cleaning up**

Methods for cleaning up : Pick up with liquid binding materials and if necessary fill in containers capable of being locked.  
Containers in which spilt substance has been collected must be adequately labelled  
Dispose of absorbed material in accordance with the regulations.  
Clean contaminated floors and objects thoroughly, observing environmental regulations

**6.4 Reference to other sections**



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Additional advice : Information regarding Safe handling, see chapter 7.  
 Information regarding personal protective measures see, chapter 8.  
 Information regarding Waste Disposal, see chapter 13.

**7. Handling and storage**

**7.1 Precautions for safe handling**

Advice on safe handling : Provide good ventilation of working area (local exhaust ventilation if necessary).

Advice on protection against fire and explosion : Keep away from sources of ignition

**7.2 Conditions for safe storage, including any incompatibilities**

Requirements for storage areas and containers : Keep only in the original container

Further information on storage conditions : Keep container tightly closed in a dry and well-ventilated place.  
 Protect against light.

Advice on common storage : Do not store or transport together with foodstuffs

Storage period : < 12 Months

Storage temperature : 0 - 25 °C

**7.3 Specific end uses**

**8. Exposure controls/personal protection**

**8.1 Control parameters**

**Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Update	Basis
<b>2-methoxy-1-methylethyl acetate</b>	108-65-6	TWA	50 ppm 275 mg/m <sup>3</sup>	2000-06-16	2000/39/EC
Further	: skin: Identifies the possibility of significant uptake through the skin				



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information	Indicative				
		STEL	100 ppm 550 mg/m3	2000-06-16	2000/39/EC
Further information	:	skin: Identifies the possibility of significant uptake through the skin Indicative			

**8.2 Exposure controls**

**Engineering measures**

See chapter7; no measures exceeding the ones mentioned are necessary.

**Personal protective equipment**

- Respiratory protection : Use respiratory protection in case of insufficient exhaust ventilation or prolonged exposure
  
- Hand protection : Break through time: > 10 min  
 Glove thickness: > 0,4 mm  
 For short-term exposure (splash protection):  
 Nitrile rubber gloves.  
 Remarks: These types of protective gloves are offered by various manufacturers. Please note the manufacturers' detailed statements, especially about the minimum thickness and the minimum breakthrough time. Consider also the particular working conditions under which the gloves are being used.
  
- Eye protection : tightly fitting safety glasses
  
- Skin and body protection : protective clothing
  
- Hygiene measures : At work do not eat, drink, smoke or take drugs.  
 Keep away from foodstuffs and beverages.  
 Wash hands before breaks and after work.  
 Use barrier skin cream.
  
- Protective measures : Do not inhale vapours  
 Avoid contact with eyes and skin  
 Observe the usual precautions for handling chemicals.

**Environmental exposure controls**

- General advice : Do not allow entry to drains,water courses or soil

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## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

Form : Liquid  
Colour : yellow to red  
  
Odour : ester-like

#### Safety data

Flash point : approx. 42 °C  
Ignition temperature : not determined  
Thermal decomposition : not determined  
Lower explosion limit : not determined  
Upper explosion limit : not determined  
Flammability (solid, gas) : not determined  
Oxidizing properties : not determined  
Autoignition temperature : not determined  
Burning number : not determined  
pH : not reasonable  
Freezing point : not determined  
Starts to boil : from 145 °C  
Sublimation point : not determined  
Vapour pressure : approx. 5 hPa, 20 °C  
Density : approx. 1 g/cm<sup>3</sup>, 20 °C  
Water solubility : The solvent is partially water soluble but the product forms two layers.  
  
Partition coefficient: n-octanol/water : not determined  
Solubility in other solvents : not determined  
Viscosity, dynamic : 110 - 140 mPas, 20 °C  
Viscosity, kinematic : not determined  
Relative vapour density : not determined  
Evaporation rate : not determined

### 9.2 Other information

## 10. Stability and reactivity

### 10.1 Reactivity

No dangerous reaction known under conditions of normal use.



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**10.2 Chemical stability**

No decomposition if stored and applied as directed.

**10.3 Possibility of hazardous reactions**

Hazardous reactions : Incompatible with oxidizing materials.

**10.4 Conditions to avoid**

Conditions to avoid : Heat, flames and sparks.

**10.5 Incompatible materials**

Materials to avoid : Oxidizing agents  
Strong acids  
Bases

**10.6 Hazardous decomposition products**

Hazardous decomposition products : No decomposition if stored and applied as directed.

**11. Toxicological information**

**11.1 Information on toxicological effects**

**Product**

Acute oral toxicity : no data available

Acute inhalation toxicity : no data available

Acute dermal toxicity : no data available

Skin corrosion/irritation : no data available

Serious eye damage/eye irritation : no data available

Respiratory or skin sensitization : no data available

**Components:**

**2-methoxy-1-methylethyl acetate :**

Acute oral toxicity : LD50: > 8.532 mg/kg, rat(female)

Acute dermal toxicity : LD50: > 5.000 mg/kg, rabbit





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**12. Ecological information**

**12.1 Toxicity**

**Product:**

Toxicity to fish : no data available

Toxicity to daphnia and other aquatic invertebrates. : no data available

Toxicity to bacteria : no data available

**Components:**

**2-methoxy-1-methylethyl acetate :**

Toxicity to fish : LC50: 100 mg/l, 96 h, Oryzias latipes (Orange-red killifish), semi-static test

Toxicity to daphnia and other aquatic invertebrates. : EC50: 373 mg/l, 48 h, Daphnia magna (Water flea)

**12.2 Persistence and degradability**

**Product:**

Biodegradability : no data available

**Components:**

**2-methoxy-1-methylethyl acetate :**

Biodegradability : 99 %, Result: Readily biodegradable., Exposure time: 28 d

**12.3 Bioaccumulative potential**

**12.4 Mobility in soil**

**12.5 Results of PBT and vPvB assessment**

**12.6 Other adverse effects**

**13. Disposal considerations**

**13.1 Waste treatment methods**

Product : Product should be taken to a suitable and authorized waste disposal site in accordance with relevant regulations and if

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necessary after consultation with the waste disposal operator  
and/or the competent Authorities

Contaminated packaging : Packaging that cannot be cleaned should be disposed of as  
product waste

### 14. Transport information

#### ADR

UN number : 1993  
Description of the goods : FLAMMABLE LIQUID, N.O.S.  
(2-Methoxy-1-methylethyl acetate)  
Class : 3  
Packing group : III  
Classification Code : F1  
Hazard identification No : 30  
Labels : 3  
Environmentally hazardous : no

#### IATA

UN number : 1993  
Description of the goods : Flammable liquid, n.o.s.  
(2-Methoxy-1-methylethyl acetate)  
Class : 3  
Packing group : III  
Labels : 3  
Environmentally hazardous : no

#### IMDG

UN number : 1993  
Description of the goods : FLAMMABLE LIQUID, N.O.S.  
(2-Methoxy-1-methylethyl acetate)  
Class : 3  
Packing group : III  
Labels : 3  
EmS Number 1 : F-E  
EmS Number 2 : S-E  
Marine pollutant : no

#### RID

UN number : 1993  
Description of the goods : FLAMMABLE LIQUID, N.O.S.  
(2-Methoxy-1-methylethyl acetate)  
Class : 3  
Packing group : III  
Classification Code : F1



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Hazard identification No : 30  
Labels : 3  
Environmentally hazardous : no

**15. Regulatory information**

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

**15.2 Chemical Safety Assessment**

**16. Other information**

**Full text of R-phrases referred to under sections 2 and 3**

R10 Flammable.

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

H226 Flammable liquid and vapour.

Decimal notation: "Thousands" places are identified with a dot (example: 2.000 mg/kg means "two thousand mg/kg"). Decimal places are identified with a comma (example: 1,35 g/cm<sup>3</sup>)

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