AZ 1505 Photoresist

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

1.1 Product identifier

Trade name : AZ 1505 Photoresist

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

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

SECTION 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-Labelling

Symbol(s) :

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.

2.3 Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical characterization

Preparation of polymer resins and diazo compounds in organic solvents (halogenfree).

Hazardous components

1-Naphthalenesulfonic acid, 6-Diazo-5,6-dihydro-5-oxo-, ester with phenyl(2,3,4-trihydroxyphenyl)methanone

CAS-No.	:	68510-93-0
EC-No.	:	270-931-7
Classification(67/548/EEC)	:	F; R11 R52/53
Classification (REGULATION (EC) No 1272/2008)	:	Self-react. D; H242 Skin Irrit. 2; H315 Aquatic Chronic 3; H412
Concentration [%]	:	>= 2,5 - < 5

2-methoxypropyl acetate

CAS-No.	:	70657-70-4
EC-No.	:	274-724-2
Classification(67/548/EEC)	:	R10 Repr.Cat.2; R61 Xi; R37
Classification (REGULATION (EC) No 1272/2008)	:	Flam. Liq. 3; H226 Repr. 1B; H360D STOT SE 3; H335
Concentration [%]	:	< 0,3

WEL substance :

2-methoxy-1-methylethyl acetate

CAS-No.	:	108-65-6
EC-No.	:	203-603-9
Registration number	:	01-2119475791-29-xxxx
Classification(67/548/EEC)	:	R10
Classification (REGULATION (EC) No 1272/2008)	:	Flam. Liq. 3; H226
Concentration [%]	:	>= 50 - <= 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.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	:	Take off all contaminated clothing immediately. If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.
Inhalation	:	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
Skin contact	:	Wash off immediately with plenty of water. If skin irritation persists, call a physician.
Eye contact	:	Immediately flush eye(s) with plenty of water. Protect unharmed eye. Remove contact lenses.
Ingestion	:	If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water spray jet
Foam
Dry powder
Carbon dioxide (CO2)

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : 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 firefighters : Well closed full protective clothing (coat and pants) including helmet.
In the event of fire, wear self-contained breathing apparatus.

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

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.
Clean contaminated floors and objects thoroughly while observing environmental regulations.

6.4 Reference to other sections

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

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	Provide sufficient air exchange and/or exhaust in work rooms.
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	:	Store in 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	:	Keep away from food and drink.
Storage period	:	< 12 Months

7.3 Specific end use(s)

: No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

Components	:	**2-methoxy-1-methylethyl acetate**
CAS-No.	:	108-65-6
Value	:	TWA
Control parameters	:	50 ppm 275 mg/m3
Update	:	2000-06-16

Basis	:	2000/39/EC
Further information	:	skin: Identifies the possibility of significant uptake through the skinIndicative
Value	:	STEL
Control parameters	:	100 ppm 550 mg/m3
Update	:	2000-06-16
Basis	:	2000/39/EC
Further information	:	skin: Identifies the possibility of significant uptake through the skinIndicative

DNEL

2-methoxy-1-methylethyl acetate : End Use: Workers
Exposure routes: Skin contact
Potential health effects: Chronic effects
Value: 54,8 mg/kg

End Use: Workers
Exposure routes: Inhalation
Potential health effects: Chronic effects
Value: 33 mg/m3

End Use: Workers
Exposure routes: Ingestion
Potential health effects: Chronic effects
1,67 mg/kg

End Use: Consumers
Exposure routes: Skin contact
Potential health effects: Chronic effects
153,5 mg/kg

End Use: Consumers
Exposure routes: Inhalation
Potential health effects: Chronic effects
275 mg/kg

PNEC

2-methoxy-1-methylethyl acetate : Fresh water
Value: 0,635 mg/l

Marine water
Value: 0,0635 mg/l

Fresh water sediment
Value: 3,29 mg/kg

Marine sediment
Value: 0,329 mg/kg

Soil
Value: 0,29 mg/kg

8.2 Exposure controls

Engineering measures

Provide sufficient air exchange and/or exhaust in work rooms.

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 goggles
Skin and body protection	:	protective clothing
Hygiene measures	:	When using do not eat, drink or smoke. Keep away from food and drink. Wash hands before breaks and at the end of workday. Use barrier skin cream.
Protective measures	:	Do not breathe vapours or spray mist. Avoid contact with skin and eyes. Observe the usual precautions for handling chemicals.

Environmental exposure controls

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

SECTION 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
Auto-ignition temperature	:	not determined
Burning number	:	not determined
pH	:	not applicable
Freezing point	:	not determined
Starts to boil	:	from 145 °C
Sublimation point	:	not determined
Vapour pressure	:	approx. 5 hPa, 20 °C
Density	:	1 g/cm3, 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	:	approx. 6 mPas, 20 °C
Viscosity, kinematic	:	not determined
Relative vapour density	:	not determined
Corrosive in contact with metals	:	not determined
Evaporation rate	:	not determined

9.2 Other information

Further information	:	Remarks: No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

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.

SECTION 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 sensitisation	:	no data available
Germ cell mutagenicity		
Genotoxicity in vitro	:	no data available
Genotoxicity in vivo	:	no data available
Further information	:	no data available

Components:

1-Naphthalenesulfonic acid, 6-Diazo-5,6-dihydro-5-oxo-, ester with phenyl(2,3,4-trihydroxyphenyl)methanone :

Acute oral toxicity	:	LD50: > 5.000 mg/kg, rat
Skin corrosion/irritation	:	rabbit, Result: Skin irritation
Serious eye damage/eye irritation	:	rabbit, Result: No eye irritation
Germ cell mutagenicity		

Genotoxicity in vitro : Ames test, Result: negative

2-methoxy-1-methylethyl acetate :

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

Acute inhalation toxicity : LC50: > 10,8 mg/l, 6 h, rat,

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

SECTION 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:

1-Naphthalenesulfonic acid, 6-Diazo-5,6-dihydro-5-oxo-, ester with phenyl(2,3,4-trihydroxyphenyl)methanone :

Toxicity to fish : LC50: 22 - 50 mg/l, 96 h, Danio rerio (zebra fish)

Toxicity to bacteria : EC50: > 1.000 mg/l, OECD 209

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:

1-Naphthalenesulfonic acid, 6-Diazo-5,6-dihydro-5-oxo-, ester with phenyl(2,3,4-trihydroxyphenyl)methanone :

Biodegradability : Result: Not readily biodegradable., OECD 301 D

2-methoxy-1-methylethyl acetate :

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

12.3 Bioaccumulative potential

Components:
2-methoxy-1-methylethyl acetate :
Bioaccumulation : Bioaccumulation is unlikely.

12.4 Mobility in soil

Components:
2-methoxy-1-methylethyl acetate :
Distribution among environmental compartments : Koc: 1,7, Highly mobile in soils

12.5 Results of PBT and vPvB assessment

Components:
2-methoxy-1-methylethyl acetate :
Assessment : The substance does not fulfill the PBT criteria., The substance does not fulfill the vPvB criteria.

12.6 Other adverse effects

Product:

Additional ecological information : no data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of contents/ container to an approved waste disposal plant.

Contaminated packaging : Dispose of as unused product.

SECTION 14: Transport information

ADR
UN number : 1993
Description of the goods : FLAMMABLE LIQUID, N.O.S. (2-Methoxy-1-methylethyl acetate)
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)
Environmentally hazardous	:	no

SECTION 15: Regulatory information

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

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

: Banned and/or restricted
2-methoxy-1-methylethyl acetate

Candidate List of Substances of Very High Concern for Authorisation

: This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

EU. REACH - Annex XIV: List of substances subject to authorisation

: Neither banned nor restricted

15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for a mixture.

SECTION 16: Other information

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

R10	Flammable.
R11	Highly flammable.
R37	Irritating to respiratory system.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R61	May cause harm to the unborn child.

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

H226	Flammable liquid and vapour.
H242	Heating may cause a fire.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H360D	May damage the unborn child.
H412	Harmful to aquatic life with long lasting effects.

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/cm3)

Further information

Further information : Observe national and local legal requirements

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.