



SAFETY DATA SHEET
AZ® P4620 Photoresist

Substance No.: GHSBBG70J7
Version 3

Revision Date 07/06/2010
Print Date 07/23/2010

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : AZ® P4620 Photoresist
Substance No. : GHSBBG70J7
Product Use Description : Intermediate for electronic industry

Company : AZ Electronic Materials USA Corp.
70 Meister Ave.
Somerville, NJ 08876

Telephone : 1-908-429-3562

Telefax : 1-908-429-5982

Emergency telephone : 1-800-424-9300 (CHEMTREC)

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards : COMBUSTIBLE LIQUID
MILD EYE IRRITANT

GHS Classification

Signal word : Warning

Hazard category, Hazard class : Flammable liquids, Category 3

Hazard statements : H226: Flammable liquid and vapour.

Precautionary statements : P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233: Keep container tightly closed.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting/equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P264: Wash skin thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection.



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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous ingredients

Component	CAS-No.	Weight percent
1-Methoxy-2-propanol acetate	108-65-6	60 - 65
Diazonaphthoquinonesulfonic esters	5610-94-6	1 - 5

Non-hazardous ingredients

Component	CAS-No.	Weight percent
Cresol novolak resin	67829000004-5653P	20 - 25

SECTION 4. FIRST AID MEASURES

First aid procedures

- Inhalation : If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.
- Skin contact : Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists.
- Eye contact : Remove contact lenses. Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or persists.
- Ingestion : Keep respiratory tract clear. If conscious, drink plenty of water. Never give anything by mouth to an unconscious person. Obtain medical attention.

SECTION 5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point : 112 °F (44 °C)
Method: closed cup

Fire fighting

Suitable extinguishing media : Carbon dioxide, water, alcohol resistant foam, dry chemical.



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Further information : Use self-contained breathing apparatus and full protective clothing.
Use water spray to cool drums in fire area.

Protective equipment and precautions for firefighters

Specific hazards during fire fighting : Thermal decomposition may generate carbon dioxide and carbon monoxide.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Environmental precautions : Do not allow to enter drains or waterways
If the product gets into drains, inform the relevant authorities immediately.

Methods for containment /
Methods for cleaning up : Wearing appropriate personal protective equipment, contain spill, ventilate area of spill or leak, remove all sparking devices or ignition sources, collect onto inert absorbent, and place in a suitable container.

SECTION 7. HANDLING AND STORAGE

Handling

Handling : Avoid breathing vapors and contact with skin, eyes, and clothing.
For personal protection see section 8.
Use only in area provided with appropriate exhaust ventilation.

Advice on protection against fire and explosion : Keep away from sources of ignition
Take precautions against accumulation of electrostatic charge

Storage

Further information on storage conditions : Keep container tightly closed in a dry and well-ventilated place.
May liberate combustible solvent vapors.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines



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Components with workplace control parameters

Components	CAS-No.	Control parameters	Basis
1-Methoxy-2-propanol acetate	108-65-6	TWA: 50 ppm	US WEEL

Engineering measures

Engineering measures : Handle only in a place equipped with local exhaust (or other appropriate exhaust).

Personal protective equipment

Eye protection : Safety eyewear to protect against splashes.

Hand protection : Solvent-resistant gloves

Skin and body protection : Clothing suitable to prevent skin contact.

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.
Respirator with filter for organic vapour
Use NIOSH approved respiratory protection.

Hygiene measures : Observe the usual precautions when handling chemicals.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form : Liquid
Color : Clear, amber-red
Odor : Strong, characteristic odor.

Safety data

Flash point : 112 °F (44 °C)
Method: closed cup
Starts to boil : from 293 °F (145 °C)
Vapour pressure : 2.6 Torr
Method: calculated
Density : 1 g/cm³
at 68 °F (20 °C)



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Water solubility : The solvent is partially water soluble but the product forms two layers.

Viscosity, dynamic : approx.35 mPas
at 68 °F (20 °C)

Loss on drying : 73 %

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid : Avoid contact with oxidizing agents.
Avoid contact with strong acids.
Avoid contact with alkaline materials.

Hazardous decomposition products : Thermal decomposition may generate carbon dioxide and carbon monoxide.

Hazardous reactions : Hazardous polymerisation does not occur.
Note: Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Data for AZ® P4620 Photoresist

Further information : No toxicological testing was carried out on the preparation.

Data for 1-Methoxy-2-propanol acetate (108-65-6)

Acute oral toxicity : LD50: 8,532 mg/kg
Species: rat

Acute inhalation toxicity : LC50: > 23.8 mg/l
Exposure time: 6 h
Species: rat

Acute dermal toxicity : LD50: > 5,000 mg/kg
Species: rabbit

Skin irritation : Result: non-irritant



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Eye irritation : Result: Mild eye irritation

Sensitisation : Species: Guinea pig
Result: non-sensitizing

Data for Diazonaphthoquinonesulfonic esters (67829000004-5546P)

Acute oral toxicity : LD50 Oral: > 5,000 mg/kg
Species: rat
By analogy with a similar product.

Skin irritation : Species: rabbit
Result: No skin irritation

Eye irritation : Species: rabbit
Result: No eye irritation

12. ECOLOGICAL INFORMATION

Data for AZ® P4620 Photoresist

Additional ecological information : No ecological testing was carried out on the preparation

Data for 1-Methoxy-2-propanol acetate (108-65-6)

Ecotoxicity effects

Toxicity to fish : LC50: 100 - 180 mg/l Exposure time: 96 h

Species: Oncorhynchus mykiss

: LC50: 161 mg/l Exposure time: 96 h

Species: Fish general (Pisces)

: NOEC: 100 mg/l Exposure time: 96 h

Species: Fish general (Pisces)

Toxicity to daphnia and other aquatic invertebrates. : EC50: > 500 mg/l
Species: Daphnia magna



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Toxicity to bacteria : EC20: 1,000 mg/l
Exposure time: 30 min
Species: activated sludge

Elimination information (persistence and degradability)

Biodegradability : Method: OECD 302 B
: The product is biodegradable.

Data for Diazonaphthoquinonesulfonic esters (67829000004-5546P)

Ecotoxicity effects

Toxicity to fish : LC50: 20 - 50 mg/l Exposure time: 96 h
Species: Danio rerio (zebra fish)
By analogy with a similar product.

Toxicity to bacteria : EC50: > 1,000 mg/l
Method: OECD 209

Elimination Information (persistence and degradability)

Biodegradability : Result: not degradable
Method: OECD 301 D

Further information on ecology

Chemical Oxygen Demand (COD) : 1.716 mg/g

SECTION 13. DISPOSAL CONSIDERATIONS

Further information : In accordance with local and national regulations.
For disposal, this material is a flammable hazardous waste under RCRA.

Contaminated packaging : Empty containers should be taken to an approved waste



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handling site for recycling or disposal.

RCRA hazardous waste : RCRA number: D001
Yes -- If it becomes a waste as sold.

SECTION 14. TRANSPORT INFORMATION

DOT
Not restricted

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
Packing instruction (cargo aircraft) : 310
Packing instruction (passenger aircraft) : 309
Packing instruction (passenger aircraft) : Y309
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
Environmentally hazardous : no

SECTION 15. REGULATORY INFORMATION

Notification status

TSCA : All components of this product are listed on the TSCA Inventory.



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DSL : All components of this product are on the Canadian DSL list.

Carcinogenicity

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

EPCRA - Emergency Planning and Community Right-to-Know Act

SARA 302 Reportable Quantity : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

Ozone-Depletion Potential : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

US State Regulations

Massachusetts Right To Know Components : No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components : Cresol novolak resin 67829000004-5653P
Diazonaphthoquinonesulfonic ester 68510-93-0



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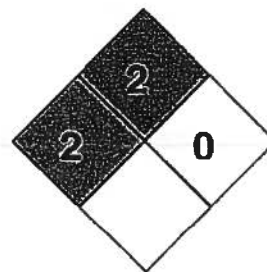
	1-Methoxy-2-propanol acetate	108-65-6
New Jersey Right To Know Components	: 1-Methoxy-2-propanol acetate	108-65-6
	Diazonaphthoquinonesulfonic ester	68510-93-0
	Cresol novolak resin	67829000004-5653P

SECTION 16. OTHER INFORMATION

Further information

HMIS Classification : Health hazard: 2
Flammability: 2
Reactivity: 0
PPE:X

NFPA Classification : Health hazard: 2
Fire Hazard: 2
Reactivity Hazard: 0
Special Hazards: NONE



GHS-Labeling

Symbol(s) :



Signal word :

Warning

Hazard statements :

Flammable liquid and vapour.

Precautionary statements :

Prevention:
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.



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Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash skin thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.

Response:

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

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:

Store in a well-ventilated place. Keep cool.

Disposal:

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

This information is supplied under the OSHA Hazard Communication Standard, 29 CFR 1910.1200, and is offered in good faith based on data available to us that we believe to be true and accurate. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable to the material. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate for that use. No warranty, express or implied, is made regarding the accuracy of this data, the hazards connected with the use of the material, or the results to be obtained from the use thereof. We assume no responsibility for damage or injury from the use of the product described herein. Data provided here are typical and not intended for use as product specifications. (R) and TM indicate trademarks of AZ Electronic Materials USA Corp., its business partners and suppliers.