



SAFETY DATA SHEET
AZ P4330-RS Photoresist

Substance No.: GHSBBG70A4
Version 3.0

Revision Date 01/03/2011
Print Date 01/06/2011

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : AZ P4330-RS Photoresist
Substance No. : GHSBBG70A4
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 number : 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 category, Hazard class : Eye irritation, Category 2A
Hazard category, Hazard class : Specific target organ toxicity - single exposure, Category 3

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous ingredients

Component	CAS-No.	Weight percent
1-Methoxy-2-propanol acetate	108-65-6	65 - 70



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Diazonaphthoquinonesulfonic esters	5610-94-6	1 - 5
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Non-hazardous ingredients

Component	CAS-No.	Weight percent
Cresol novolak resin	67829000004-5653P	25 - 30

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
- Ignition temperature : not determined
- Lower explosion limit : not determined
- Upper explosion limit : not determined

Fire fighting

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.



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Further information : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.
Cool containers / tanks with water spray.

Protective equipment and precautions for firefighters

Specific hazards during fire fighting : As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10).

SECTION 6. ACCIDENTAL RELEASE MEASURES

Environmental precautions : Do not allow uncontrolled discharge of product into the environment.
Try to prevent the material from entering drains or water courses.
If the product contaminates rivers and lakes or drains inform respective authorities.

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 : Do not breathe vapours or spray mist.
Do not get on skin or 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 heat and sources of ignition.
Take measures to prevent the build up of electrostatic charge.
Avoid shock and friction.

Storage

Further information on storage conditions : Keep container tightly closed in a dry and well-ventilated place.
May liberate combustible solvent vapors.
Store at appropriate temperature. See label for details.



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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

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
Ignition temperature : not determined
Lower explosion limit : not determined



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Upper explosion limit	: not determined
Starts to boil	: from 293 °F (145 °C)
Vapour pressure	: 2.6 Torr Method: calculated
Density	: 1 g/cm ³ at 68 °F (20 °C)
Water solubility	: The solvent is partially water soluble but the product forms two layers.
Viscosity, dynamic	: approx.35 mPas at 68 °F (20 °C)
Evaporation rate	: not determined
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	: Hazardous decomposition products due to incomplete combustion. Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).
Hazardous reactions	: Hazardous polymerisation does not occur.
Chemical stability	: Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Data for AZ P4330-RS Photoresist

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

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



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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

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 P4330-RS Photoresist

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

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



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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
- 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)



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Biodegradability : Result: not degradable
Method: OECD 301 D

Further information on ecology

Chemical Oxygen Demand : 1.716 mg/g
(COD)

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 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.



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(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.

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



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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).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

US State Regulations

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

Pennsylvania Right To Know Components : 1-Methoxy-2-propanol acetate 108-65-6
Cresol novolak resin 6782900004-5653P
Diazonaphthoquinonesulfonic ester 68510-93-0

New Jersey Right To Know Components : 1-Methoxy-2-propanol acetate 108-65-6
Cresol novolak resin 6782900004-5653P
Diazonaphthoquinonesulfonic ester 68510-93-0

SECTION 16. OTHER INFORMATION

Further information

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

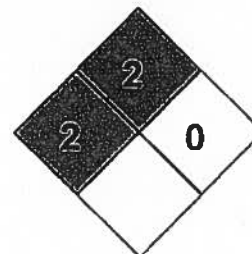


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NFPA Classification : Health hazard: 2
Fire Hazard: 2
Reactivity Hazard: 0
Special Hazards: NONE



GHS-Labeling

Symbol(s) :



Signal word : Warning

Hazard statements : Flammable liquid and vapour.
Causes eye irritation.
May cause respiratory irritation.
May cause drowsiness or dizziness.

Precautionary statements : **Prevention:**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting/ equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
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:



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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.

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