



SAFETY DATA SHEET
AZ 300 MIF Developer

Substance No.: GHSBBG70N4
Version 2.4

Revision Date 12/09/2011
Print Date 01/06/2012

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : AZ 300 MIF Developer
Material No. : 18441123163
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 : SEVERE EYE IRRITANT
MODERATE SKIN IRRITANT

GHS Classification

Signal word : Warning

Hazard category, Hazard class : Corrosive to metals, Category 1
Hazard category, Hazard class : Acute toxicity, Category 4, Oral
Hazard category, Hazard class : Skin corrosion/irritation, Category 2
Hazard category, Hazard class : Eye irritation, Category 2A

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous ingredients

Component	CAS-No.	Weight percent
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Tetramethylammonium hydroxide	75-59-2	< 3
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Non-hazardous ingredients

Component	CAS-No.	Weight percent
Water	7732-18-5	> 95

SECTION 4. FIRST AID MEASURES

First aid procedures

- 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 : If inhaled, remove to fresh air. Keep respiratory tract clear. If breathing is difficult, give oxygen. Get medical attention if irritation develops and persists.
- 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. Wash contaminated clothing before reuse.
- Eye contact : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Remove contact lenses.
- Ingestion : Never give anything by mouth to an unconscious person. If person is conscious, give water or milk to dilute stomach contents. Do not induce vomiting. Keep patient at rest and obtain immediate medical assistance

SECTION 5. FIRE-FIGHTING MEASURES

Flammable properties

- Flash point : Water-based material with low level of combustible solid content.

Fire fighting

- Suitable extinguishing media : Product itself is non-combustible; Fire extinguishing method of surrounding areas must be discussed.



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Further information : The product itself does not burn.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Protective equipment and precautions for firefighters

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

SECTION 6. ACCIDENTAL RELEASE MEASURES

Environmental precautions : Do not allow contact with soil, surface or ground water.
Prevent spreading by use of suitable barriers.
Local authorities should be advised if significant spillages cannot be contained.

Methods for containment /
Methods for cleaning up : Wearing appropriate personal protective equipment, contain spill, ventilate area of spill or leak. Collect onto inert absorbent. Place in suitable container.

SECTION 7. HANDLING AND STORAGE

Handling

Handling : Use only in area provided with appropriate exhaust ventilation.
Wear personal protective equipment.
Avoid inhalation of vapour or mist.

Storage

Further information on storage conditions : Keep containers tightly closed in a dry, cool and well-ventilated place.
Protect from frost, heat and sunlight.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Contains no substances with occupational exposure limit values.

Engineering measures



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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 : Rubber gloves

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

Respiratory protection : Breathing apparatus needed only when aerosol or mist is formed.
Use NIOSH approved respiratory protection.

Hygiene measures : Observe the usual precautions when handling chemicals.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state : liquid
Color : clear
colourless

Odor : odourless

Safety data

Flash point : Water-based material with low level of combustible solid content.

Freezing point : approx. 32 °F (0 °C)

Boiling point : approx. 212 °F (100 °C)

Vapour pressure : 17.5 Torr
at 68 °F (20 °C)
Corresp. to vapour pressure of water

Density : approx. 1 g/cm³

Loss on drying : > 95 %



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SECTION 10. STABILITY AND REACTIVITY

- Conditions to avoid : Freezing conditions and high temperatures
Avoid contact with strong acids.
Avoid contact with alkaline materials.
Avoid contact with oxidizing agents.
- Hazardous decomposition products : No hazardous decomposition products known.
- Hazardous reactions : Hazardous polymerisation does not occur.
Note: Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Data for AZ 300 MIF Developer

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

Data for 25% Tetramethylammonium hydroxide solution (75-59-2)

- Acute oral toxicity : LD50: 136 mg/kg
Species: rat
- Acute dermal toxicity : LD50: 25 mg/kg
Species: rat
- Acute toxicity (other routes of administration) : LDLo: 19 mg/kg
Application Route: subcutaneous
Species: Mouse
- Skin irritation : Result: Severe skin irritation
Classification: Causes burns.
- Eye irritation : Result: strongly corrosive
Classification: Corrosive
- Further information : Causes severe burns



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12. ECOLOGICAL INFORMATION

Data for AZ 300 MIF Developer

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

Data for 25% Tetramethylammonium hydroxide solution (75-59-2)

Ecotoxicity effects

Toxicity to daphnia and other aquatic invertebrates. : EC50: 55.6 mg/l
Exposure time: 48 h
Species: Daphnia magna

Toxicity to algae : EC50: 1,000 mg/l
Exposure time: 72 h
Species: Scenedesmus subspicatus
Method: OECD 201

Elimination information (persistence and degradability)

Biodegradability : Result: Readily biodegradable.
Method: Tested according to Directive 92/69/EEC.

Additional ecological information : Do not allow to enter soil, waterways or waste water

SECTION 13. DISPOSAL CONSIDERATIONS

Further information : Dispose of as special waste in compliance with local and national regulations.
This product would be considered a hazardous waste under RCRA due to high pH unless neutralized prior to disposal.

Contaminated packaging : Empty containers should be taken to local recyclers for disposal.

RCRA hazardous waste : RCRA number: D002
Yes -- If it becomes a waste as sold.



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SECTION 14. TRANSPORT INFORMATION

DOT

Not restricted

IATA

UN number : 1835
Description of the goods : Tetramethylammonium hydroxide, solution
Class : 8
Packing group : III
Labels : 8
Environmentally hazardous : no
Additional data for transport : PASSENGER AIRCRAFT SHIPMENT OF CONTAINERS
>2.5L NOT PERMITTED. CARGO AIRCRAFT ONLY!,
CARGO AIRCRAFT SHIPMENT OF CONTAINERS >5L NOT
PERMITTED.

IMDG

UN number : 1835
Description of the goods : TETRAMETHYLAMMONIUM HYDROXIDE SOLUTION
Class : 8
Packing group : III
Labels : 8
EmS Number 1 : F-A
EmS Number 2 : S-B

Marine pollutant : no
Environmentally hazardous : no

SECTION 15. REGULATORY INFORMATION

Notification status

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

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

WHMIS Classification : E: Corrosive Material

Canadian PBT Chemicals : This product does not contain any components on the DSL that
are classified as Persistent, Bioaccumulative and Toxic (PBT)
under CEPA.



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**CERCLA Reportable
Quantity**

This material does not contain any components with a CERCLA RQ.

Carcinogenicity

IARC

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.

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 304 Extremely
Hazardous Substances**

: This material does not contain any components with a section 304 EHS RQ.

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. Clean Air Act - Hazardous Air Pollutants (HAP)

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

US. Clean Air Act Section 112(r); Regulated toxic and flammable substances for Accidental Release Prevention - 40 CFR 68.130 (subpart F)

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).



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**US. Clean Air Act Section 111 SOCM I Intermediate or Final Volatile Organic Compounds (VOC) -
40 CFR part 60.489**

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

US State Regulations

Massachusetts Right To Know Components	: No components are subject to the Massachusetts Right to Know Act.	
Pennsylvania Right To Know Components	: Water	7732-18-5
New Jersey Right To Know Components	: Tetramethylammonium hydroxide	75-59-2
	Water	7732-18-5

SECTION 16. OTHER INFORMATION

Further information

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



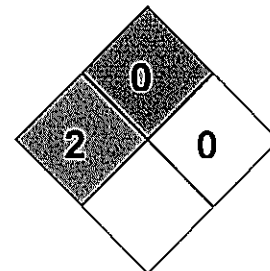
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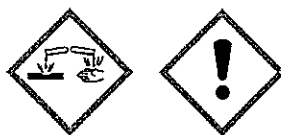
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NFPA Classification : Health hazard: 2
Fire Hazard: 0
Reactivity Hazard: 0
Special Hazards: NONE



GHS-Labeling

Symbol(s)



Signal word

: Warning

Hazard statements

: May be corrosive to metals.
Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.

Precautionary statements

: **Prevention:**
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/ eye protection/ face protection.
Response:
IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.
Storage:
Store in a well-ventilated place. Keep cool.
Store in a closed container.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.



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The tetramethylammonium ion (TMA), as TMAH, in this developer is toxic at low levels to the water flea ceriodaphnia dubia (CD) used in the whole effluent toxicity (WET) biomonitoring test. Data from the supplier suggests that continuous input of 60-100 ppm TMA to a small POTW should not cause WET toxicity. It is expected that discharges to a sizable POTW will not affect the ability to pass the WET tests. However, discharges to a small POTW or direct discharges to surface waters should be carefully reviewed. Contact AZ Electronic Materials Product Safety for additional information (908-429-3562 or 908-429-3586).

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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