



**SAFETY DATA SHEET**  
**AZ 300 MIF DEVELOPER**

Substance No.: GHSBBG70N4  
Version 4.0

Revision Date 05/29/2015  
Print Date 05/29/2015

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : AZ 300 MIF DEVELOPER

Product Use Description : Intermediate for electronic industry

Company : EMD Performance Materials Corp.  
An affiliate of Merck KGaA, Darmstadt Germany  
One International Plaza, Suite 300  
Philadelphia, PA 19113

Telephone : 1-888-367-3275

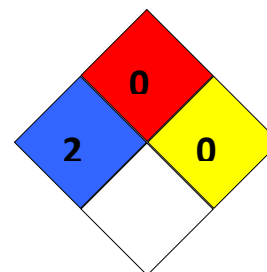
Emergency telephone number : 1-800-424-9300 (CHEMTREC)

**SECTION 2. HAZARDS IDENTIFICATION**

**Emergency Overview**

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

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



**GHS Classification**

Hazard category, Hazard class : Corrosive to metals, Category 1

Hazard category, Hazard class : Acute toxicity, Category 4, Oral

Hazard category, Hazard class : Skin Irritation, Category 2

Hazard category, Hazard class : Eye irritation, Category 2A



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**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 dry place. Store in a closed container.  
**Disposal:**  
Dispose of contents/ container to an approved waste disposal plant.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Hazardous ingredients**

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

**Non-hazardous ingredients**

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



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**SECTION 4. FIRST AID MEASURES**

**First aid procedures**

- 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
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**SECTION 5. FIREFIGHTING 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.
- 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 firefighters : Well closed full protective clothing (coat and pants) including helmet.  
Wear self-contained breathing apparatus for firefighting if necessary.



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**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.

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**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.

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**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Guidelines**

Contains no substances with occupational exposure limit values.

**Engineering measures**

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



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### 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.

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## 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/cm<sup>3</sup>
- Relative vapour density : no data available
- 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.

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**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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**SECTION 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: rapidly biodegradable  
Method: Tested according to Directive 92/69/EEC.

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

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**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  
Additional data for transport : 18 - Alkalis

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**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.

**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.

**CERCLA Reportable  
Quantity** :

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





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**Carcinogenicity**

<b>IARC</b>	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.
<b>OSHA</b>	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.
<b>NTP</b>	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.
<b>ACGIH</b>	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** : This material does not contain any components with a SARA 302 RQ.

**SARA 304 Extremely Hazardous Substances** : This material does not contain any components with a section 304 EHS RQ.

**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).

**US. Clean Air Act Section 111 SOCM I Intermediate or Final Volatile Organic Compunds (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).



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### 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

<b>Massachusetts Right To Know Components</b>	: No components are subject to the Massachusetts Right to Know Act.	
<b>Pennsylvania Right To Know Components</b>	: Water	7732-18-5
<b>New Jersey Right To Know Components</b>	: Tetramethylammonium hydroxide	75-59-2
	: Water	7732-18-5
<b>California Prop. 65 Components</b>	: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.	

## SECTION 16. OTHER INFORMATION

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.

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. For any sub-heading within any section not addressed herein, no relevant information is determined or applicable. 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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