

Substance No.: GHSBBG704Z

Version 2.3

Revision Date 10/02/2012 Print Date 10/02/2012

#### **SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : AZ 726 MIF Developer

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

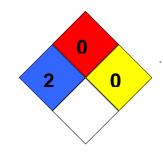
MODERATE SKIN IRRITANT

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

Hazard category, Hazard

class

Hazard category, Hazard

class

Hazard category, Hazard

class

: Corrosive to metals, Category 1

Acute toxicity, Category 4, Oral

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Skin corrosion/irritation, Category 2

Eye irritation, Category 2A



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### **GHS-Labelling**

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

#### **SECTION 5. FIREFIGHTING MEASURES**

Flammable properties

Flash point : Water-based material containing no combustible components.

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

for firefighters

Special protective equipment : 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.



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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** 

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.



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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 containing no combustible components.

Freezing point : approx. 32 °F (0 °C)

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

Density : approx.1 g/cm3

Loss on drying : > 95 %

**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

Hazardous reactions

products

ucts

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

: No hazardous decomposition products known.

**SECTION 11. TOXICOLOGICAL INFORMATION** 

Data for AZ 726 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



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Acute dermal toxicity : LD50: 25 mg/kg

Species: rat

Acute toxicity (other routes of : LDLo: 19 mg/kg

administration)

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

#### 12. ECOLOGICAL INFORMATION

#### Data for AZ 726 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 : EC50: 55.6 mg/l

aquatic invertebrates

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 : This product would be considered a hazardous waste under

RCRA due to high pH unless neutralized prior to disposal. Dispose of as special waste in compliance with local and

national regulations.

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.

#### **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



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#### **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.

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.

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

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

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.



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Clean Air Act

Ozone-Depletion : This product neither contains, nor was manufactured with a

Potential 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 SOCMI 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 SOCMI 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

Tetramethylammonium hydroxide 75-59-2

New Jersey Right To Know Components : Water 7732-18-5

Tetramethylammonium hydroxide 75-59-2



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#### **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. 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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