

Substance No.: GHSBBG70E7

Version 4.2

Revision Date 04/02/2015 Print Date 12/29/2015

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

Product name : AZ 300T STRIPPER

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** 

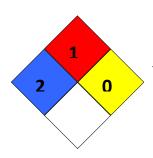
**HMIS Classification** : Health hazard: 2

Flammability: 1 Reactivity: 0 PPE:X

NFPA Classification : Health hazard: 2

Fire Hazard: 1 Reactivity Hazard: 0

Special Hazards: NONE



**GHS Classification** 

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

class

Hazard category, Hazard Acute toxicity, Category 4, Dermal



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class

Hazard category, Hazard

class

Hazard category, Hazard

class

Hazard category, Hazard

class

Skin Irritation, Category 2

Serious eye damage/eye irritation, Category 1

Reproductive toxicity, Sub-category 1B

**GHS-Labelling** 

Symbol(s) :







Signal word : Danger

Hazard statements : Harmful if swallowed.

Harmful in contact with skin.

Causes skin irritation.

Causes serious eye damage.

May damage fertility or the unborn child.

Precautionary statements : **Prevention:** 

Obtain special instructions before use.

Do not handle until all safety precautions have been read and

understood.

Keep only in original container.

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

Wash skin thoroughly after handling.

Wear protective gloves/ eye protection/ face protection.

Response:

IF ON SKIN: Wash with plenty of soap and water.

IF INHALED: Remove victim to fresh air and keep at rest in a

position comfortable for breathing.

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

rinsing.

IF exposed or concerned: Get medical advice/ attention.

Specific treatment (see supplemental first aid instructions on

this label).

If skin irritation occurs: Get medical advice/ attention. If eye irritation persists: Get medical advice/ attention. Take off contaminated clothing and wash before reuse.

Absorb spillage to prevent material damage.

Storage:

Store in a well-ventilated place. Keep container tightly closed.

Disposal:



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

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

### **Hazardous ingredients**

Component	CAS-No.	Weight percent
1,2-Propanediol	57-55-6	50 - 60
1-Methyl-2-pyrrolidone	872-50-4	40 - 45
Tetramethylammonium hydroxide	75-59-2	< 4

### **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. FIREFIGHTING MEASURES**

### Flammable properties

Flash point :  $> 200 \, ^{\circ}\text{F} \, (> 93 \, ^{\circ}\text{C})$ 

### Fire fighting



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

carbon dioxide.

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

firefighting

: 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 entry to drains, water courses or soil

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, 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 : Keep container tightly closed in a dry and well-ventilated



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storage conditions place.

May liberate combustible solvent vapors.

Store at appropriate temperature. See label for details.

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

### **Exposure Guidelines**

### Components with workplace control parameters

Components	CAS-No.	Control parameters	Basis
1-Methyl-2-pyrrolidone	872-50-4	TWA: 10 ppm	US WEEL
1,2-Propanediol	57-55-6	TWA: 10 mg/m3	

**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 dust or aerosol formation use respirator with an

approved filter.

Respirator with combination filter for vapour/particulate (EN

141)

Use NIOSH approved respiratory protection.

Hygiene measures : Observe the usual precautions when handling chemicals.

### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

### **Appearance**

Form : liquid



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Color : light yellow

dark amber

Odor : musty

Safety data

Flash point :  $> 200 \, ^{\circ}\text{F} \, (> 93 \, ^{\circ}\text{C})$ 

Vapour pressure : app. 0.2 Torr

Density : 1.035 g/cm3

Water solubility : completely miscible

VOC : 1,000 g/l

Loss on drying : > 96 %

**SECTION 10. STABILITY AND REACTIVITY** 

Conditions to avoid : Avoid contact with oxidizing agents.

Avoid contact with strong acids.

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 300T STRIPPER**

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



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### Data for N-Methyl-2-Pyrrolidone (872-50-4)

Acute oral toxicity : LD50 Oral: 3,605 mg/kg

Species: rat

Source: Supplier MSDS

Acute inhalation toxicity : LC50: > 5.1 mg/l

Exposure time: 4 h

Species: rat

Source: Supplier MSDS

Acute dermal toxicity : LD50 Dermal: 5,000 mg/kg

Species: rat

Source: Supplier MSDS

Skin irritation : Species: rabbit

Result: Skin irritation Method: Draize Test Source : Supplier MSDS

Eye irritation : Species: rabbit

Result: Eye irritation Method: Draize Test Source : Supplier MSDS

### Data for 1,2-Propanediol (57-55-6)

Acute oral toxicity : LD50: 30,000 mg/kg

Species: rat

Acute inhalation toxicity : LC50: > Saturation

Species: rat

Acute dermal toxicity : LD50: > 10,000 mg/kg

Species: rat

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



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Acute oral toxicity : LD50: 136 mg/kg

Species: rat

Acute dermal toxicity : LD50: 25 mg/kg

Species: Guinea pig

Skin irritation : Result: Corrosive

Classification: Corrosive

Eye irritation : Result: corrosive

Classification: Corrosive

### **SECTION 12. ECOLOGICAL INFORMATION**

### **Data for AZ 300T STRIPPER**

Additional ecological

information

: No ecological testing was carried out on the preparation.

### Data for N-Methyl-2-Pyrrolidone (872-50-4)

### **Ecotoxicity effects**

Toxicity to fish : LC50: > 500 mg/l Exposure time: 96 h

Species: Salmo gairdneri static Source : Supplier MSDS

Toxicity to daphnia and other : EC50: > 1,000 mg/l

aquatic invertebrates

EC50: > 1,000 mg/l Exposure time: 24 h

Species: Daphnia magna Method: DIN 38412 T.11 Source: Supplier MSDS

Toxicity to algae : EC50: > 500 mg/l

Exposure time: 72 h Species: Green algae Method: DIN 38412 T.9 Source: Supplier MSDS



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Toxicity to bacteria : EC50: > 600 mg/l

Exposure time: 0.5 h

Species: activated sludge, industrial

Method: ISO 8192

Elimination information (persistence and degradability)

Biodegradability : aerobic BOD in % of theoretical OD

Result: Readily biodegradable (according to OECD criteria)

73 %

Method: OECD 301C; ISO 9408; 92/69/EEC, C.4-F

Source: Supplier MSDS

Data for 1,2-Propanediol (57-55-6)

**Ecotoxicity effects** 

Toxicity to fish : LC50: 50,000 mg/l

Toxicity to daphnia and other : EC50: > 4,850 mg/l

aquatic invertebrates

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

**Ecotoxicity effects** 

Toxicity to fish : LC50: 35.1 mg/l

Toxicity to daphnia and other : LC50: 55.6 mg/l

aquatic invertebrates

Exposure time: 48 h

Species: Daphnia magna (Water flea)

Toxicity to algae : EC50: > 1,000 mg/l

Exposure time: 72 h

Species: Scenedesmus subspicatus

Method: OECD 201



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### Elimination information (persistence and degradability)

Biodegradability : Readily biodegradable.

### **SECTION 13. DISPOSAL CONSIDERATIONS**

Further information : Dispose of as hazardous 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 an approved waste

handling site for recycling or 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



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Labels : 8 EmS Number 1 : F-A EmS Number 2 : S-B

Marine pollutant : no Environmentally hazardous : no

Additional data for transport : 18 - Alkalis

### **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 : D1A: Very Toxic Material Causing Immediate and Serious Toxic

Effects

D2B: Toxic Material Causing Other Toxic Effects

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 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



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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: The following components are subject to reporting levels established by SARA Title III,

Section 313:

SARA 313 Components : 1-Methyl-2-pyrrolidone

872-50-4

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 SOCMI Intermediate or Final Volatile Organic Compunds (VOC) - 40 CFR part 60.489

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

1,2-Propanediol 57-55-6

### **Clean Water Act**

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



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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

: 1-Methyl-2-pyrrolidone

872-50-4

Pennsylvania Right To Know Components

: 1,2-Propanediol

57-55-6

1-Methyl-2-pyrrolidone

872-50-4

New Jersey Right To Know Components

: 1,2-Propanediol

57-55-6

1-Methyl-2-pyrrolidone

872-50-4

Tetramethylammonium hydroxide

75-59-2

California Prop. 65 Components WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive

harm.

1-Methyl-2-pyrrolidone

872-50-4

### **SECTION 16. OTHER INFORMATION**

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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