



**SAFETY DATA SHEET**  
**AZ NMP Rinse**  
Substance No.: BBG70S9  
Version 2.4

Revision Date 10/09/2012  
Print Date 01/25/2013

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : AZ NMP Rinse  
Material No. : 18452923164  
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)

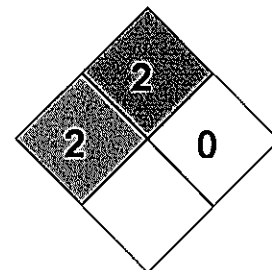
**SECTION 2. HAZARDS IDENTIFICATION**

**Emergency Overview**

OSHA Hazards : COMBUSTIBLE LIQUID AND VAPOUR.  
IRRITANT  
CONTAINS MATERIAL THAT MAY ADVERSELY AFFECT  
THE DEVELOPING FOETUS.

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

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



**GHS Classification**

Hazard category, Hazard : Skin irritation, Category 2



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class  
Hazard category, Hazard class      Eye irritation, Category 2A  
class  
Hazard category, Hazard class      Specific target organ toxicity - single exposure, Category 3  
class  
Hazard category, Hazard class      Reproductive toxicity, Sub-category 1B  
class

### GHS-Labeling

Symbol(s)



Signal word

: Danger

Hazard statements

: Causes skin irritation.  
Causes serious eye irritation.  
May cause respiratory irritation.  
May damage the unborn child.

Precautionary statements

: **Prevention:**  
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 if you feel unwell:  
Get medical advice/ attention.  
**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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### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous ingredients



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Component	CAS-No.	Weight percent
1-Methyl-2-pyrrolidone	872-50-4	100

### 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 : 196 - 199 °F (91 - 93 °C)  
Method: closed cup

#### Fire fighting

- 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 : Thermal decomposition may generate carbon dioxide, carbon monoxide, and oxides of nitrogen.



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### 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.

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### 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-Methyl-2-pyrrolidone	872-50-4	TWA: 10 ppm	US WEEL

#### 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 : 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.

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#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

##### Appearance

- Form : Liquid
- Color : Clear, colorless to pale yellow
- Odor : Slight amine odor.

##### Safety data

- Flash point : 196 - 199 °F (91 - 93 °C)  
Method: closed cup
- Starts to boil : 396 °F (202 °C)
- Vapour pressure : 0.24 Torr  
at 68 °F (20 °C)
- Density : 1.027 g/cm<sup>3</sup>
- Water solubility : soluble
- VOC : 1,027 g/l (Calculated value)
- Loss on drying : > 98 %

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#### SECTION 10. STABILITY AND REACTIVITY

- Conditions to avoid : Avoid contact with oxidizing agents.



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Avoid contact with strong acids.

- Hazardous decomposition products : Thermal decomposition may generate carbon dioxide, carbon monoxide, and oxides of nitrogen.
- Hazardous reactions : None reasonably foreseeable.
- Chemical stability : Stable under normal conditions.

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### SECTION 11. TOXICOLOGICAL INFORMATION

#### Data for AZ NMP Rinse

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

#### 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



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### 12. ECOLOGICAL INFORMATION

#### Data for AZ NMP Rinse

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 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

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



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### SECTION 13. DISPOSAL CONSIDERATIONS

- Further information : Dispose of contents/ container to an approved incineration plant.  
Dispose of in accordance with local regulations.
- Contaminated packaging : Packaging that cannot be cleaned should be disposed of as product waste
- RCRA hazardous waste : RCRA number: NONE  
No -- Not as sold.
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### SECTION 14. TRANSPORT INFORMATION

DOT  
Not restricted

TDG  
Not restricted

IATA  
Not restricted

IMDG  
Not restricted

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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 : B3: Combustible Liquid  
D2B: Toxic Material Causing Other Toxic Effects
- 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 :
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### Quantity

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

### 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** : 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:** 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).



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### **US. Clean Air Act Section 111 SOCM 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 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** : 1-Methyl-2-pyrrolidone 872-50-4

**Pennsylvania Right To Know Components** : 1-Methyl-2-pyrrolidone 872-50-4

**New Jersey Right To Know Components** : 1-Methyl-2-pyrrolidone 872-50-4

**California Prop. 65 Components** : Developmental toxin.

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## 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. 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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