MATERIAL SAFETY DATA SHEET
AZ(R) BARLI COATING (0.25 MICRON GRADE)

Identification of the company:
AZ Electronic Materials USA Corp.
70 Melster Avenue
Somerville, NJ 08876
Telephone No.: 800-515-4164

Information on the substance/preparation
Product Safety: 908-429-3562
Emergency Tel. number: 800-424-0300 CHEMTREC

Trade name: AZ(R) BARLI COATING (0.25)

Section 3 - Composition Information

Hazardous ingredients:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-no. (Trade secret no.)</th>
<th>Concentration [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexanone</td>
<td>108-94-1</td>
<td>85.00 - 95.00</td>
</tr>
<tr>
<td>N-(2,4-Dichlorophenyl)-1,4-</td>
<td></td>
<td>1.00</td>
</tr>
<tr>
<td>benzodiamine</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Non-hazardous ingredients:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-no. (Trade secret no.)</th>
<th>Concentration [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl methyl ether maleimide</td>
<td>678290000004-5010P</td>
<td>5.00 - 10.00</td>
</tr>
</tbody>
</table>

Section 4 - Hazards Identification


Expected route of entry

After contact with skin: yes
After ingestion: no
After inhalation: yes
After contact with eyes: Contact with liquid and vapors.

Skin absorption: yes

Health effects of exposure:

Component Information:
 Cyclohexanone (108-94-1)
 Cyclohexanone is an irritant to eyes, skin, mucous membranes, and respiratory tract. May cause central nervous system depression, tremors, gastro effects, and decreased heart rate. Inhalation may cause labored breathing. Repeated or prolonged exposure to high concentrations may cause kidney and liver damage. Cyclohexanone can be absorbed through intact skin.

Aromatic diamine compound (6373-73-5)
Aromatic diamine compound may cause an allergic skin reaction.

Listed carcinogens: IARC: NO NTP: NO OSHA: NO

HMIS:

Health: 2 Flammability: 2 Reactivity: 0 Personal protection: X

NFPA:

Health: 2 Flammability: 2 Reactivity: 0 Special notice: NONE

Section 04: First Aid Measures:

After inhalation: Remove victim to fresh air.
 Consult physician if irritation occurs.

After contact with skin: Consult physician if exposure is extensive or if irritation occurs. Immediately remove contaminated clothing and wash affected area thoroughly with soap and water.

After contact with eyes: Flush thoroughly with water for 15 minutes. Get immediate medical help.

After ingestion: If person is conscious, give water or milk to dilute stomach contents. Never give anything by mouth to an unconscious person. Consult physician.
MATERIAL SAFETY DATA SHEET
A2(F) BARLI COATING (0.25 MICRON GRADE)

Substance key: BBG7094
Version 'f'

Flash point: 115 °F
Method: closed cup

Suitable extinguishing media:
Carbon dioxide, water, alcohol resistant foam, dry chemical.

Special fire fighting procedure:
Use self-contained breathing apparatus and full protective clothing. Use water spray to cool drums in fire area.

Special hazards from the substance itself, its combustion products or from its vapors:
Thermal decomposition may generate carbon dioxide, carbon monoxide, and oxides of nitrogen.

Unusual fire and explosion hazards:
Solvent vapors. Emits toxic fumes under fire conditions.

Steps to be taken in case of spill or leak:
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.

Advice on safe handling:
Keep away from heat and flame.
Avoid breathing vapors and contact with skin, eyes, and clothing.
Use only with adequate ventilation and proper protective eyewear, gloves, and clothing.
Wash thoroughly after handling.
Keep container closed.

Further information for storage conditions:
Store at appropriate temperature. See label for details.
Store in original container.
Transport and store under dry conditions tightly closed.
May liberate combustible solvent vapors.
Section 6: Physical and Chemical Properties

- Form: Liquid
- Color: Clear, yellow
- Odor: Strong, characteristic odor.
- Solubility in water: Forms two layers.
- Density: 0.971 g/cm³
- Starts to boil: 155 °C
- Evaporation number: Reference substance: diethyl ether <
- Vapor pressure: 3.65 Torr
MATERIAL SAFETY DATA SHEET
AZ(R) BARLI COATING (0.25 MICRON GRADE)

Substance key: BBG7084
Version 1

REVISION DATE: 11/15/2005
Print Date: 03/08/2006

Loss on drying: 91 %

Hazardous reactions: Stable.
Hazardous polymerization: Will not occur.
Conditions to avoid: Avoid contact with oxidizing agents. Avoid contact with strong acids. Avoid contact with alkaline materials.

Cyclohexanone (108-94-1)
Acute oral toxicity: LD50 rat 1,636 mg/kg

Cyclohexane (108-94-1)
Acute oral toxicity: LD50 rat 1,600 mg/kg

Cyclohexane (108-94-1)
Acute inhalation toxicity: LC50 rat 10.3 mg/l Exposure time: 4 h

Cyclohexane (108-94-1)
Acute dermal toxicity: LD50 rabbit 980 mg/kg

Cyclohexane (108-94-1)
Skin irritation: Mild skin irritant.

Cyclohexane (108-94-1)
Eye irritation: Severe irritant

Cyclohexane (108-94-1)
Fish toxicity: (Fathead minnow) 527-732 mg/l
Exposure time: 96 h

Cyclohexane (108-94-1)
Toxicity of aquatic EC50 (Daphnia magna)
MATERIAL SAFETY DATA SHEET
AZIRI BARLI COATING (0.25 MICRON GRADE)

Substance key: BBG7034
Version 1

Invertebrates: 800 mg/l

Section 15: Regulatory Information

TSCA Status: All components of this product are listed on the TSCA inventory.
MATERIAL SAFETY DATA SHEET
AZ(R) BARLI COATING (0.25 MICRON GRADE)

Substance key: BBG7054
Version 1

SARA (section 311/312):
- Reactive hazard: no
- Pressure hazard: no
- Fire hazard: yes
- Immediate/acute: yes
- Delayed/chronic: no

SARA 313 Information:
This product is not subject to SARA Title III Section 313 reporting requirements under 40 CFR 372.

Volatile organic compounds:
Content VOC (g/l): 900 g/l
Method: calculated

Label Information

CAUTION!

COMBUSTIBLE LIQUID AND VAPOR HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. Contains material that, based on animal data, can cause skin, eye, and respiratory irritation. Prolonged or repeated overexposure may cause gastric, liver, kidney, and central nervous system effects. WARNING! MAY CAUSE ALLERGIC SKIN REACTIONS.

Keep away from heat and flames. Avoid breathing vapor. Avoid contact with skin, eyes, and clothing. Use only with adequate ventilation, and proper protective eyewear, gloves, and clothing. Wash thoroughly after handling. Keep container closed.

In case of contact, flush eyes with plenty of water for 15 minutes. Get medical attention immediately. Flush affected skin areas with water, and wash with mild soap and water. Remove contaminated clothing. If INHALED, remove individual to fresh air. If breathing is difficult, give oxygen. If ingested, give water or milk to dilute stomach contents. Never give anything by mouth to an unconscious person. Get medical attention immediately for ingestion or breathing problems or if skin contact is extensive.

In case of fire, use water, alcohol resistant foam, dry chemical, or CO2.

If spilled, wear protective clothing, remove ignition sources, prevent sparks, and ventilate area. Absorb with inert material, collect, and place in a chemical waste container.

Keep sealed in original container. Store between 41 and 59 F (5 and 16 C). Exceeding this range plus or minus 18 F (10 C) for one week does not adversely affect the properties. Empty container may contain harmful residue.

The solvent in this product is not photochemically reactive per Rule 102 of the California South Coast Air Quality Management District.
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. (R) and TM indicate trademarks of AZ Electronic Materials USA Corp., its business partners and suppliers.
Product ID:BEO
MSDS Date:01/01/1987
FSC:5865
NIIN:00-862-3531
MSDS Number: BFTCN

--- Responsible Party ---
Company Name: BRUSN WELLMAN INC. ELMORE OHIO 43416
Emergency Phone Num: 419-862-2745
CAGE: MO122

--- Contractor Identification ---
Company Name: BRUSN WELLMAN INC
Address: 1200 HANNA BLDG
Box: City: CLEVELAND
State: OH
ZIP: 44110
Country: US
Phone: 216-486-4200
CAGE: 05451
Company Name: BRUSN WELLMAN INC. ELMORE OHIO 43416
CAGE: MO122

----------------- Composition/Information on Ingredients -----------------

Ingredient Name: BERYLLIUM OXIDE (AS BERYLLIUM)
CAS: 1304-56-9
RTECS #: DS4025000
OSHA PEL: 0.002 MG/M3; C, 0.005
ACGIH TLV: 0.002 MG/M3; A2; 8990

----------------- Hazards Identification -----------------

Effects of Overexposure: CHRONIC; SERIOUS PULMONARY ILLNESS

----------------- First Aid Measures -----------------

First Aid: CUT OR PUNCTURE WOUND REQUIRES (IMMED) ATTENTION BY FLUSHING
W/H*20. BEO CAUSES ULCERS THAT ARE EXTREMELY HARD TO HEAL. INHALE:
IMMED GET A CHEST X-RAY. EYE: FLUSH W/H*20 FOR AT LEAST 15 MINS. IN
ALL CASES SEE A MD.

----------------- Fire Fighting Measures -----------------

Unusual Fire/Explosion Hazards: NON FLAMMABLE

----------------- Accidental Release Measures -----------------

Spill Release Procedures: CLEAN UP SPILLS PROMPTLY BY VACUUM OR WET
METHODS TO AVOID GENERATING DUST. USE APPROVED RESPIRATORY
EQUIPMENT

----------------- Handling and Storage -----------------

Handling and Storage Precautions: POWDERED MATERIALS SHOULD BE STORED IN
SEALED CONTAINERS TRANSFERS SHOULD BE DONE IN VENTILATED HOOD
Other Precautions: AIR SAMPLING OF AIRBORNE MATERIAL SHOULD BE DONE BY
QUALIFIED PERSON TO DETERMINE HAZARD AND CONTROL REQUIREMENTS.

------------ Exposure Controls/Personal Protection ------------

Respiratory Protection: NIOSH APPROVED CARTRIDGE RESPIRATOR OR SUPPLIED
AIR MASK
Ventilation: LOCAL EXHAUST FOR OPERATIONS CAUSING MATERIAL TO BE
AIRBORNE
Protective Gloves: IMPERVIOUS
Eye Protection: FACE SHIELD
Supplemental Safety and Health

------------- Physical/Chemical Properties -------------

HCC: T3
Appearance and Odor: WHITE POWDER OR SOLID

------------- Stability and Reactivity Data --------------

Stability Indicator/Materials to Avoid: YES
Hazardous Decomposition Products: VOLATILE BERYLLIUM HYDROXIDE AT 2200 F
WITH WATER

------------- Disposal Considerations ------------------

Waste Disposal Methods: BERYLLIUM OXIDE IS NORMALLY RECYCLED. DISPOSE IN
ACCORDANCE WITH LOCAL, STATE FEDERAL REGULATIONS

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assume responsibility for the suitability of this information to their
particular situation.