



MATERIAL SAFETY DATA SHEET

AZ 400K DEVELOPER (US)

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Substance key: BBG7070
Version : 2 - 2 / USA

Revision Date: 01/10/2005
Date of printing :03/10/2005

Section 01 - Product Information

Identification of the company:

AZ Electronic Materials USA Corp.
70 Meister Avenue
Somerville, NJ 08876,
Telephone No.: +1 800-515-4164

Information of the substance/preparation:

Product Safety: +1 908-429-3562

Emergency tel. number: +1 800-424-9300 CHEMTREC

Trade name: AZ 400K DEVELOPER (US)
Material number: 184432
Chemical family: Aqueous Basic Developer

Section 02 - Composition information on hazardous ingredients

Hazardous ingredients:

Component	CAS-no. (Trade secret no.)	Concentration
Potassium borates	20786-60-1	< 15 %

Non-hazardous ingredients:

Component	CAS-no. (Trade secret no.)	Concentration
Water	7732-18-5	> 85 %

Section 03 - Hazards identification

Emergency overview:

Causes severe eye irritation.
Clear, colorless liquid.
Noncombustible.
No odor.
Water soluble.

Expected Route of entry:

Inhalation: Inhalation of mist.
Skin contact: Contact with liquid and mist.
Eye contact: Contact with liquid and mist.
Ingestion: no
Skin absorption: no

Health effects of exposure:

Eye: Causes severe eye irritation. Skin: Non-irritating to skin. Inhalation: No hazard in normal industrial use. Ingestion: No hazard in normal industrial use. Reproductive and birth defects: Exposures having no adverse effect on the mother should have no effect on the fetus. Overexposure of male rats to borates causes damage to the testes and reduced sperm



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production. Systemic effects: Repeated high-level exposure causes kidney damage.
Aqueous solution containing 2-15% potassium borates.

Known effects on other illnesses: Preexisting skin and eye conditions may be aggravated.

Listed carcinogen: IARC: NO NTP: NO OSHA: NO

HMIS:

Health: 2

Flammability: 0

Reactivity: 0

Personal protection: X

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.
Do not induce vomiting.

Section 05 - Fire fighting measures

Flashpoint: Water-based material containing no combustible components.,
Compatible with extinguishing agents.

Section 06 - Accidental release measures

Steps to be taken in case of spill or leak:

Wearing appropriate personal protective equipment, contain spill, collect onto inert absorbent, and place in a suitable container.
Rinse residual with water.

Section 07 - Handling and storage

Advice on safe handling:

Avoid contact with skin, eyes, and clothing.



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Further info on storage conditions:

Store at appropriate temperature. See label for details.
Store in original container.
Keep from freezing.

Section 08 - Exposure controls / personal protection

Respiratory protection: Chemical cartridge respirator recommended for exposures exceeding TLV.

Hand protection: Rubber gloves.

Eye protection: Safety goggles or full face shield to protect against splashes.

Other protective equipment: Clothing suitable to prevent skin contact.

Advice on system design: Where mist is present, provide local exhaust ventilation or a respirator certified for mist by NIOSH.

Section 09 - Physical and chemical properties

Form: Liquid

Color: Clear

Odor: No odor.

pH: 12.9

Solubility in water: soluble

Density: 1.085 g/cm³

Boiling point : 212 °F

Loss on drying: 88 %

Further information:
Corrosive effect on aluminium.

Section 10 - Stability and reactivity

Chemical stability: Stable.

Hazardous Polymerization: Will not occur.

Conditions to avoid: Avoid contact with strong acids.
This product is expected, by test or analogy, to slowly attack aluminum and perhaps other nonferrous metals, releasing hydrogen gas.

Section 11 - Toxicological information

Product information:

Acute oral toxicity: No data.



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Skin irritation: non-irritant (4 h, rabbit)
Method: Draize Method

Skin irritation: D.O.T. four hour rabbit skin test of this product was negative for skin corrosion. (4 h, rabbit)

Eye irritation: severe eye irritant. (rabbit eye)
Method: Draize Method

Section 12 - Ecological information

Section 13 - Disposal considerations

Waste disposal information:

Consult local, state, and federal regulations.

This product would be considered a hazardous waste under RCRA due to high pH unless neutralized prior to disposal.

Section 14 - Transport information

DOT not restricted

IATA

Proper shipping name: Caustic alkali liquid, n.o.s.
Class: 8
Packing group: III
UN/ID number: UN 1719
Primary risk: 8
Hazard inducer(s): Potassium Borates

IMDG

Proper shipping name: Caustic alkali liquid, n.o.s
Class: 8
Packing group: III
UN no.: UN 1719
Primary risk: 8
Hazard inducer(s): Potassium Borates
EmS: F-A S-B

Further information:

Classification due to corrosivity of aluminum.

This product is not regulated for surface transportation, based on 49 CFR 173.154(d)(1).

Section 15 - Regulatory information

TSCA Status:

All components of this product are listed on the TSCA Inventory.

SARA (section 311/312):

Reactive hazard: no



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Pressure hazard: no
Fire hazard: no
Immediate/acute: yes
Delayed/chronic: no

Section 16 - Other information

Label information:

WARNING!

Alkaline solution. Contains material that may cause severe skin and eye irritation. May cause corneal damage. Dry or concentrated residue may be corrosive.

Avoid breathing mist, and 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. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately for ingestion or breathing problems or if skin contact is extensive.

If spilled, wear protective clothing, absorb with inert material, collect and place in a chemical waste container. Rinse residue with water.

Keep sealed in original container. Avoid freezing and direct sunlight. Product should be stored > 32 F (0 C). 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.

NFPA:

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

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 or suppliers.