



# MATERIAL SAFETY DATA SHEET



## SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**MANUFACTURER/SUPPLIER NAME:** Clariant Corporation, AZ Electronic Materials  
PO Box 3700, 70 Meister Avenue  
Somerville, NJ 08876-1258

**TELEPHONE NUMBERS:** Emergency-CHEMTREC: (800) 424-9300  
Product Safety Information: (908) 429-3593  
Customer Service: (800) 515-4164

**PRODUCT NAME:** AZ(R) 400K DEVELOPER  
**SYNONYMS:** None

**MSDS NO.** 7070  
**REVISION DATE:** 11/19/1999  
**DATE PRINTED:** 05/17/2001

## SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name &amp; CAS Number</u>	<u>Weight Percent</u>	<u>Hazardous?</u>	<u>NJ Trade Secret #</u>	<u>Ingredient Synonyms</u>	<u>Other Information:</u>
Water 007732-18-5	>85	No	NA	None	NJ/PA RTK listings. Not on any other state RTK list.
Potassium borates 020786-80-1	<15	No	NA	None	NJ/PA RTK listings. Not on any other state RTK list.

## SECTION 3. HAZARDS IDENTIFICATION

### **EMERGENCY OVERVIEW:**

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

### **POTENTIAL HEALTH EFFECTS:**

#### **Eye:**

Causes severe eye irritation

#### **Skin:**

No hazard in normal industrial use.

#### **Ingestion:**

No hazard in normal industrial use.

#### **Inhalation:**

No hazard in normal industrial use.

#### **Systemic Effects:**

Repeated high-level exposure causes kidney damage.

**Reproductive & birth defects:**

Exposures having no adverse effect on the mother should have no effect on the fetus. Overexposure of males to borates causes damage to the testes and reduced sperm production.

**Relevant Routes of Exposure:**

Liquid and mist contact with skin and eyes. Inhalation of mist.

**Medical Conditions Aggravated:**

Preexisting skin and eye conditions may be aggravated.

**ENVIRONMENTAL OVERVIEW:**

No or very low environmental hazard.

**SECTION 4. FIRST AID MEASURES**

**FIRST AID PROCEDURES:**

**Inhalation:**

Remove victim to fresh air. Consult physician if irritation occurs.

**Eye Contact:**

Flush thoroughly with water for 15 minutes. Get immediate medical help.

**Skin Contact:**

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

**Ingestion:**

If person is conscious, give water or milk to dilute stomach contents. Never give anything by mouth to an unconscious person. Do not induce vomiting. Consult physician.

**SECTION 5. FIRE FIGHTING MEASURES**

Noncombustible. Water-based material containing no combustible components. Compatible with extinguishing agents.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

**Spill or Leak Procedures:**

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

**SECTION 7. HANDLING AND STORAGE**

**Handling:**

Avoid contact with skin, eyes, and clothing.

**Storage:**

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

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

**Engineering Controls:**

Where mist is present, provide local exhaust ventilation or a respirator certified for mist by NIOSH.

**Personal Protective Equipment (PPE):**

Clothing suitable to prevent skin contact. Safety goggles or full face shield to protect against splashes. Rubber gloves.

Exposure Guidelines:

<u>Chemical Name &amp; CAS Number</u>	<u>Weight Percent</u>	<u>Manufacturer's TWA TLV*</u>	<u>ACGIH TWA TLV*</u>	<u>OSHA PEL*</u>	<u>NIOSH REL*</u>	<u>AIHA WEEL*</u>
Water 007732-18-5	>85					
Potassium borates 020788-80-1	<15					

\*TWA TLV = Time Weighted Average Threshold Limit Value  
 ACGIH = American Conference of Governmental Industrial Hygienists  
 OSHA PEL = Occupational Safety and Health Administration Permissible Exposure Limit  
 NIOSH REL = National Institute of Occupational Safety and Health Recommended Exposure Limit  
 AIHA WEEL = American Industrial Hygiene Association Workplace Environmental Exposure Level  
 \*\*Skin Notation  
 \*\*\*Hoechst Celanese Workplace Exposure Level (HCC WEL); Included is a "no contact" recommendation for NMP due to its skin absorption properties.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance:** Clear liquid.  
**Odor:** No odor.  
**Physical State:** Liquid with dissolved solids.  
**pH** 12.9  
**Vapor Pressure** About the same as water.  
**Boiling Point:** 100 deg C  
**Solubility in water:** Soluble.  
**Specific gravity:** 1.09  
**VOC:** 0  
**Evaporation rate (butyl acetate=1):** About the same as water.  
**Viscosity:** Similar to water.  
**% Volatile:** 88%

**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**

**Carcinogen:**  
 IARC: NO NTP: NO OSHA: NO

Ingredient Toxicity Data:

<u>Chemical Name &amp; CAS Number</u>	<u>Weight Percent</u>	<u>oral rat LD50</u>	<u>skin rbt LD50</u>	<u>inh rat LC50</u>
Water 007732-18-5	>85			
Potassium borates 020786-60-1	<15			

**TOXICITY HAZARD STATEMENTS FOR PRODUCT:**

**Eye Effects:**

Testing in rabbits shows that the material is a severe eye irritant.

**Skin Effects:**

Testing in animals shows that this material is a non-irritant. D.O.T. four hour rabbit skin test of this product was negative for skin corrosion.

**Acute Oral Effects:**

No data.

**Subchronic Effects:**

Repeated exposure to boric acid or its salts has been associated with gastrointestinal effects, kidney damage, skin eruptions, testicular atrophy, and reduced sperm production..

**Chronic Effects:**

Chronic exposure may result in accumulation of borates in the body, gastrointestinal disturbances, kidney damage, skin eruptions, testicular atrophy and aspermia.

**Mutagenicity/Genotoxicity:**

Testing of components suggest no genotoxic hazard.

**SECTION 12. ECOLOGICAL INFORMATION**

**Ingredient Ecological Toxicity Data:**

<u>Chemical Name &amp; CAS Number</u>	<u>Weight Percent</u>	<u>Fish LC50</u>	<u>Daphnia EC50</u>	<u>Algae IC50</u>
Water 007732-18-5	>85			
Potassium borates 020786-60-1	<15			

**Environmental hazard information statements (using EU classification criteria):**

**Toxicity to fish:**

Based on data from components, this material is classified as: Not Harmful (LC50 >100 mg/L).

**Toxicity to daphnids:**

Based on data from components, this material is classified as: Not Harmful (EC50 greater than 100 mg/L).

**Environmental Fate:**

Based on data from components, this material is considered resistant to biodegradation.

### SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal:**

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/IATA Shipper Entry:**

Caustic alkali liquid, n.o.s. (potassium borates), 8, UN1719, III.

**Other Information:**

Classification due to corrosivity of aluminum.

### SECTION 15. REGULATORY INFORMATION

**TSCA Inventory Status:**

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

**SARA Title III section 313:**

This product is not subject to SARA Title III Section 313 reporting requirements under 40CFR372.

**OSHA Physical Hazards:**

None

**OSHA Health Hazards:**

Irritant, Eye Hazard, Skin Hazard.

**SARA (311, 312) Hazard Class(es):**

Acute health hazard.

### SECTION 16. OTHER INFORMATION

**HMS Ratings:**

Health = 2; Flammability = 0; Reactivity = 0; PPE=X

**NFPA Ratings:**

Health = 2; Flammability = 0; Reactivity = 0; Special Hazard = None.

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