

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION -----

MANUFACTURER/SUPPLIER NAME:

CLARIANT CORPORATION
AZ ELECTRONIC MATERIALS
P.O. 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: 03/31/2000

-----SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS -----

CHEMICAL NAME & CAS NUMBER	WEIGHT PERCENT	HAZARDOUS?	NJ TRADE SECRET #	INGREDIENT SYNONYMS	OTHER INFORMATION:
WATER 007732-18-5	>85	NO	NA	NONE	NJ/PA RTK LISTINGS. NOT ON ANY OTHER STATE RTK LIST.
POTASSIUM BORATES 020786-60-1	<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:

CHEMICAL NAME & CAS NUMBER	WEIGHT PERCENT	MANUFACTURER'S TWA TLV*	ACGIH TWA TLV*	OSHA PEL*	NIOSH REL*	AIHA WEEL*
WATER 007732-18-5	>85					
POTASSIUM BORATES 020786-60-1	<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:

CHEMICAL NAME & CAS NUMBER	WEIGHT PERCENT	ORAL RAT LD50	SKIN RBT LD50	INH RAT LC50
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WATER 007732-18-5	>85			
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POTASSIUM BORATES 020786-60-1	<15			
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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:

CHEMICAL NAME & CAS NUMBER	WEIGHT PERCENT	FISH LC50	DAPHNIA EC50	ALGAE IC50
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WATER 007732-18-5	>85			
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POTASSIUM BORATES 020786-60-1	<15			
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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 THE 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 -----

HMIS RATINGS:

HEALTH = 2
FLAMMABILITY = 0
REACTIVITY = 0
PPE = G

NFPA RATINGS:

HEALTH = 2
FLAMMABILITY = 0
REACTIVITY = 0
SPECIAL
HAZARD = NONE.

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