

CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER: 20-816

ENVIRONMENTAL ASSESSMENT AND/OR FONSI

**ENVIRONMENTAL ASSESSMENT**  
**AND**  
**FINDING OF NO SIGNIFICANT IMPACT**  
**FOR**  
**AZOPT**  
**(brinzolamide)**

**Ophthalmic Suspension 1%**

**Division of Anti-Inflammatory, Analgesic, and Ophthalmologic  
Drug Products  
(HFD-550)**

**NDA 20-816**

**FOOD AND DRUG ADMINISTRATION**  
**CENTER FOR DRUG EVALUATION AND RESEARCH**

**FINDING OF NO SIGNIFICANT IMPACT**

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**(brinzolamide)**

**Ophthalmic Suspension 1%**

**Division of Anti-Inflammatory, Analgesic, and Ophthalmologic  
Drug Products  
(HFD-550)**

The National Environmental Policy Act of 1969 (NEPA) requires all Federal agencies to assess the environmental impact of their actions. FDA is required under NEPA to consider the environmental impact of approving certain drug product applications as an integral part of its regulatory process.

The Food and Drug Administration, Center for Drug Evaluation and Research has carefully considered the potential environmental impact of this action and has concluded that this action will not have a significant effect on the quality of the human environment and that an environmental impact statement therefore will not be prepared.

In support of their new drug application for AZOPT, ALCON Laboratories, Inc. has prepared an abbreviated environmental assessment in accordance with 21 CFR 25.31a(b)(3)(attached) which evaluates the potential environmental impacts of the manufacture, use and disposal of the product.

Brinzolamide is a chemically synthesized drug which is administered as a ophthalmic suspension in the treatment of glaucoma. The drug substance is manufactured by two pharmaceutical firms outside the United States. The drug product is manufactured by Alcon (Puerto Rico), Inc. The finished drug product will be used in by physicians and patients in a hospital, clinic, or home.

Brinzolamide may enter the environment from excretion by patients, from disposal of pharmaceutical waste or from emissions from manufacturing sites.

Disposal of the drug may result from out of specification lots, discarding of unused or expired product, and user disposal of empty or partly used product and packaging. Out-of-date drug substance is disposed of at a permitted waste facility. Rejected or returned drug product will be disposed of at a licensed landfill, incineration, or sanitary sewer system. At U.S. hospitals and clinics, empty or partially empty packages will be disposed according to hospital/clinic

regulations. From home use, empty or partially empty containers will typically be disposed of by a community's solid waste management system which may include landfills, incineration and recycling, while minimal quantities of unused drug may be disposed of in the sewer system.

The Center for Drug Evaluation and Research has concluded that the product can be manufactured, used and disposed of without any expected adverse environmental effects. Precautions taken at the sites of manufacture of the bulk product and its final formulation are expected to minimize occupational exposures and environmental release. Adverse effects are not anticipated upon endangered or threatened species or upon property listed in or eligible for listing in the National Register of Historic Places.

4/17/97  
DATE

/S/

Prepared by  
Phillip G. Vincent, Ph.D  
Environmental Scientist  
Center for Drug Evaluation and Research

4/18/97  
DATE

/S/

Concurred  
Nancy Sager  
Acting Supervisor/Team Leader  
Environmental Assessment Team  
Center for Drug Evaluation and Research

Attachments: Environmental Assessment  
Material Safety Data Sheet (drug substance)

## Attachment 4

ENVIRONMENTAL ASSESSMENT

- Section for FOI Disclosure -

Drug Product - Brinzolamide Ophthalmic SuspensionItem 1. Date: January 17, 1997Item 2. Applicant: Alcon Laboratories, Inc.Item 3. Address: 6201 South Freeway  
(P. O. Box 6600)  
Fort Worth, Texas 76134-2099Item 4. Description of the Proposed Action:a. Requested Approval

Pursuant to the provisions of 21 CFR 314.50, a New Drug Application (NDA) is being submitted for Brinzolamide Ophthalmic Suspension. The proposed drug product is a sterile, multi-dose, topical ophthalmic suspension containing 0.1% brinzolamide which is a carbonic anhydrase inhibitor.

The proposed product will be packaged in a DROP-TAINER dispensing system

This environmental assessment is being submitted pursuant to 21 CFR 25.31.

b. Need for Action

The proposed product is administered topically to the eyes and is indicated for the treatment of glaucoma.

c. Production Locations

1. Drug Substance

The drug substance manufacturer is identified and details of the manufacturing site are referenced. We ask that the name and address of the drug substance manufacturer be considered confidential under FOIA procedures.

2. Drug Product

The drug product, Brinzolamide Ophthalmic Suspension, will be manufactured by:

Alcon (Puerto Rico), Inc.  
Road 925 Barrio Junguitos  
Humacao, Puerto Rico 00791

The manufacturing facility is located in an industrial park section of Humacao, Puerto Rico. The site contains approximately 35 acres and is served by two major road ways. The Alcon campus is bordered by the roadways, a vacant parcel of undeveloped property held by the \_\_\_\_\_ and several industrial sites varying in business endeavors from pharmaceutical process, industrial and domestic storage, individual agricultural type endeavors and some raw material processing plants.

d. Locations of Use

The drug product will be available by prescription only and will be used by physicians and patients in a hospital, clinic, or home.

e. Disposal Sites

1. Drug Substance

The drug substance is returned to the vendor for disposal if found to be out of specification as established in the purchasing agreement. Out-of-date drug substance is disposed of by Alcon as nonhazardous waste by the permitted solid waste disposer. The facility currently being used is identified in Item 6.

2. Drug Product

- a. Rejected drug product at the Alcon Puerto Rico manufacturing facility is disposed of by incineration (larger quantities), or grinding and landfilling (small quantities). Both methods operate in compliance with the governing laws of the Commonwealth of Puerto Rico, local regulatory requirements and federal environmental regulations. The permits for both operations are cross-referenced in Part 6.
- b. Returned drug products are sent to Alcon's Returned Goods Department in Fort Worth, Texas housed within Alcon's Central Distribution building. In the case of Brinzolamide Ophthalmic Suspension, the disposal process is completed by processing the finished product through the controlled use grinding system. The release of product-suspension after grinding is legally captured and discharged to the sanitary sewer system under the

discharge permit issued by the City of Fort Worth, acting under both State and Federally granted authority. The plastic containers (ground) are then discharged to the compliantly permitted landfill. Current permits for liquid and solid disposal are detailed in Item 6 of this Environmental Assessment.

- c. Empty or partially empty containers will be disposed of by the user as nonhazardous waste. Typically, they are disposed of through hospitals, clinics, or communities solid waste management system which could include landfills, incineration, or recycling.

Item 5. Identification of Chemical Substances That are the Subject of the Proposed Action:

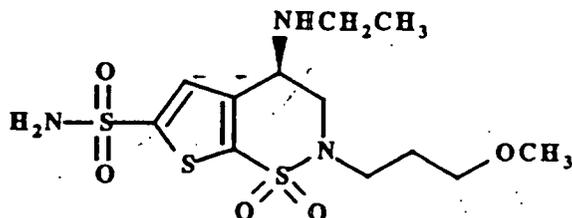
a. Nomenclature

1. USAN Name: Brinzolamide
2. Proprietary Name: Not yet determined
3. Chemical Name: (*R*)-(+)-4-Ethylamino-2-(3-methoxypropyl)-3,4-dihydro-2H-thieno[3,2-e]-1,2-thiazine-6-sulfonamide-1,1-dioxide

b. CAS Registration Number: 138890-62-7

c. Molecular Formula:  $C_{12}H_{21}N_3O_5S_3$

d. Molecular Weight: 383.49

e. Structural Formula:f. Physical Description:

White, odorless, crystalline powder. Aqueous solubility is pH dependent with minimal solubility at neutral pH and increased solubility at more basic or acidic pHs. Solubility in various solvents is as follows:

Solvent	$\mu\text{g/mL}$
Methanol	> 20000
Ethanol	8000
2-Propanol	2000
1-Octanol	500
Water	430
Water pH 3.79	63828 30365
Water pH 5.10	3285
Water pH 6.25	592
Water pH 7.37	402
Water pH 7.95	469
Water pH 9.03	1270
Water pH 10.0	12335

g. Additives:

none

h. Impurities:

This information is considered confidential and is protected from disclosure under FOIA procedures. Copies of the Material Safety Data

Sheets (MSDSs) for the drug substance (brinzolamide) and drug product (Brinzolamide Ophthalmic Suspension) are presented as Exhibits 1A and 1B.

Item 6. Introduction of Substances Into the Environment.

a. Drug Substance

Brinzolamide is manufactured outside the United States.

In lieu of detailed documentation, Certificates of Compliance from the manufacturers, \_\_\_\_\_ and \_\_\_\_\_ are provided. These certificates certify:

- 1) compliance with all applicable local and environmental laws;
- 2) compliance with all emission requirements set forth in all permits applicable to the production of brinzolamide, and;
- 3) that approval and the subsequent increase in production of brinzolamide at the facility is not expected to affect compliance with current emission requirements or compliance with environmental laws.

b. Drug Product

Potential environmental hazards addressed for manufacture of the drug product and disposal of returned product are those emitted into the air, water and land disposal. Waste streams (air, liquid, solid) which emanate as a result of the production of Brinzolamide Ophthalmic Suspension are reviewed for the purpose of determining if any of the characteristics of said waste are deemed special, hazardous or non-hazardous under the definitions as stated by applicable regulations promulgated and enforced by the United States Environmental

Protection Agency, Commonwealth of Puerto Rico, Puerto Rico's Environmental Quality Board, the Texas Natural Resources Conservation Commission and the City of Fort Worth. This method of exercising proper controls is done as a natural step within the compliant production methodology process used within Alcon's Puerto Rico manufacturing facility and Alcon's Returned Goods center in Fort Worth, Texas. All waste that emanates from the production facility and which is generated from the returned goods operations is handled in accordance with applicable environmental regulations and appropriate permits if required. These controls exercised are continually expressed in the various employee safety programs including those under the jurisdiction of the Occupational Safety and Health Administration as written in CFR29-1910.

Air:

Humacao, Puerto Rico: The processes, including sterilization, used to manufacture Brinzolamide Ophthalmic Suspension are not of the type that would impact any permitted air emissions from the Alcon manufacturing site. An environmental air emissions permit specific for this drug product is therefore not necessary.

Raw material particulate(s) are captured by internal means via filtration methodology and there are no emissions to the atmosphere discharged as a consequence of the manufacture of Brinzolamide Ophthalmic Suspension. These controls exercised under the site air emissions

permit allow this product to be produced without additional controls. The regulatory precedent is established and recognized by all applicable Puerto Rico, Federal, and local environmental regulatory bodies. The permit for all site air emissions relative to the Puerto Rico Manufacturing Facility is as follows:

Air Emissions Operating Permit  
Permit No. PFE-36-0895-1206-IIO  
Puerto Rico Environmental Quality Board  
Santurce, Puerto Rico, 00910  
Valid December 4, 1995, through December 4, 2000

- Fort Worth, Texas: The destruction and disposal of returned goods received and disposed of at Alcon's Returned Goods center does not generate air emissions. Hence, this operation is not affected by federal, state, or local regulations.

Water:

The by-products and any other wastes pursuant to the making of Brinzolamide Ophthalmic Suspension and the destruction of returned product are minimal in volume. Any discharge of effluents that would terminate in any public or private water system or reservoir is fully within compliance of all applicable standards.

- Humacao, Puerto Rico: The residual amounts of brinzolamide from the manufacture of Brinzolamide Ophthalmic Suspension that could enter the local effluent discharges are very small and estimates are provided in Attachment 3. Residual amounts are discharged to the waste water treatment facility

prior to discharge to the local municipal waste water treatment collection and treatment system. The Puerto Rico Aqueduct and Sewer Authority routinely monitors waste water discharges from Alcon's facility. Alcon has no "open" regulatory issues and is considered compliant in this regard.

The permits relative to wastewater are as follows:

Permit No.: GDA-88-607-016  
Puerto Rico Aqueduct & Sewer Authority  
P. O. Box 7066 - Barrio-Obrero Station  
San Juan, Puerto Rico  
Valid June 26, 1996, through June 26, 1998

Permit No. C-AG-80-001  
Puerto Rico Environmental Quality Board  
P. O. Box 11488  
Santurce, Puerto Rico, 00910  
Valid May 31, 1995, through May 30, 1997

Fort Worth, Texas: Any residual amounts of product discharged to the municipal sanitary sewer in the process of grinding prior to landfilling are minimal in volume and are fully within compliance of all applicable standards. The city of Fort Worth monitors the liquid discharges of Alcon Laboratories on an unannounced basis. Alcon has no "open" regulatory issues and is considered compliant in this regard.

The permits relative to wastewater are as follows:

Permit No.: 415  
City of Fort Worth Water Department  
Industrial Waste Section  
Fort Worth, Texas  
Valid December 1, 1995, through May 31, 1997

Land:

The drug product manufacturing facility and returned goods operations maintain current registrations-for the purposes of general, specific, and hazardous wastes. All wastes are disposed of within the dictates of current regulations by permitted disposers at authorized sites. No treatment of solid waste is necessary or required on site.

Humacao, Puerto Rico: The method of disposal for rejected drug product follows the methodology exercised in the controls used within the manufacturing sector. The characteristic of components both in individual form as well as in combinations are reviewed for the purpose of determining any characteristics that might place them under a group or special stream as detailed by the various applicable environmental agencies. Depending on the quantity of waste, reject product is either incinerated or landfilled. These disposal methods do not adversely affect any of the environmental permits for the applicant's drug product manufacturing operations.

The current solid waste disposal vendors are:

Air Permit No. PFE-LC-16-0691-0825-II-III-O  
Commercial Incineration Corporation  
P. O. Box 9086, Plaza Carolina Station  
Carolina, Puerto Rico  
Valid until amended

Permit License No. SRP-0003  
Control de Desperdicios, Incorporated (Landfill)  
P.R. Road 923 Km. 1.7  
Barrio Buena Vista  
Humacao, Puerto Rico  
- Valid through July 7, 2000

Fort Worth, Texas: Plastic containers and residuals from grinding of returned goods are discharged to the compliantly permitted landfill. The current permit is as follows:

Texas Water Commission Permit No. YJ-1019  
Waste Management, Inc.  
Central Region  
1320 Greenway Drive, Suite 900  
Irving, Texas 75038  
Permit in effect until withdrawn

c. Compliance

Citations of applicable Federal, State, and local emission requirements have been provided in Item 6.b.

Humacao, Puerto Rico: Alcon Laboratories, Inc. will comply with all current, applicable Puerto Rico Commonwealth, local, municipal and federal emission standards as they apply in the production of Brinzolamide Ophthalmic Suspension. The production of same will not affect any current environmentally related permits or employee safety programs as written by The Occupational Safety and Health Administration, United States Department of Labor, within the Alcon (Puerto Rico), Inc. manufacturing facility located in Humacao, Puerto Rico.



1/17/97

Richard W. Ray  
Senior Director  
Corporate Safety and Environmental Affairs  
Alcon Laboratories, Inc.

Date

Fort Worth, Texas: Alcon Laboratories, Inc. will comply with all current, applicable municipal, state and federal emission standards as they apply in the returned goods operations regarding Brinzolamide Ophthalmic Suspension. The production of same will not affect any current environmentally related permits or employee safety programs as written by The Occupational Safety and Health Administration, United States Department of Labor, within the Alcon Laboratories, Inc. facility located in Fort Worth, Texas.



1/17/97

Richard W. Ray  
Senior Director  
Corporate Safety and Environmental Affairs  
Alcon Laboratories, Inc.

Date

- d. Effect of Approval on Compliance with Current Emission Requirements  
As stated in our compliance statement, the production of Brinzolamide Ophthalmic Suspension will not adversely affect any current environmentally related permits or employee safety programs.

Items 7-11

This information is not ordinarily required since the proposed action is for NDA approval of a human drug which is for topical ophthalmic application only.

Item 12. List of Preparers

Richard W. Ray

Assisted by Dusty P. Pruitt

Curriculum Vitae for the above are attached.

Item 13. Certification

The undersigned official certifies that the information presented is true, accurate, and complete to the best of the knowledge of Alcon Laboratories, Inc.



1/17/97

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Richard W. Ray  
Senior Director  
Corporate Safety and Environmental Affairs  
Alcon Laboratories, Inc.

Date

Item 14. References

None

Item 15. Appendices

Exhibits 1A and 1B contain disclosable drug substance and drug Product Material Safety Data Sheets.

Exhibit 1A

MSDS - Drug Substance

Exhibit 1A

MATERIAL SAFETY DATA INFORMATION

20-JAN-1992

\*\*\*\*\* SECTION I \*\*\*\*\*

MANUFACTURER/SOURCE OF INFORMATION: ALCON LABORATORIES, INC.

EMERGENCY TEL: 817-551-4444

ADDRESS: 6201 SOUTH FREEWAY, FORT WORTH, TEXAS 76134

CHEMICAL NAME AND SYNONYMS:

AL04862;

CAS NO.: AP0000478

NIOSH/RTECS NO.: N/A

MOLECULAR FORMULA: PROPRIETARY

MOLECULAR WEIGHT: PROPRIETARY

CERCLA HAZARD RATINGS (SCALE 0-3):

HEALTH-N/A

FIRE-N/A

REACTIVITY-N/A

PERSISTENCE-N/A

\*\*\*\*\* SECTION II (COMPONENTS AND CONTAMINANTS) \*\*\*\*\*

PERCENTAGE: 100%

COMPONENT: AL04862

EXPOSURE LIMITS: NOT DETERMINED

\*\*\*\*\* SECTION III (PHYSICAL DATA) \*\*\*\*\*

APPEARANCE: WHITE SOLID.

BOILING POINT: NOT DETERMINED

MELTING POINT: NOT DETERMINED

SPECIFIC GRAVITY: NOT DETERMINED

VAPOR PRESSURE: NOT DETERMINED

EVAPORATION RATE: NOT DETERMINED

SOLUBILITY IN WATER: NOT DETERMINED

VAPOR DENSITY: NOT DETERMINED

\*\*\*\*\* SECTION IV (FIRE AND EXPLOSION HAZARD DATA) \*\*\*\*\*

FIRE AND EXPLOSION HAZARD: NOT DETERMINED

FLASH POINT: NOT DETERMINED

UPPER EXPLOSION LIMIT: NOT DETERMINED

LOWER EXPLOSION LIMIT: NOT DETERMINED

FIREFIGHTING MEDIA: USE EXTINGUISHING MEDIA APPROPRIATE FOR THE SURROUNDING FIRE CONDITIONS.

FIREFIGHTING: WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING.

HAZARDOUS GASES PRODUCED: NOT DETERMINED

\*\*\*\*\* SECTION V (HEALTH EFFECTS AND FIRST AID) \*\*\*\*\*

\*TOXICITY: DATA NOT DETERMINED-

CARCINOGENICITY: DATA NOT DETERMINED

INHALATION--

.HIGHLY TOXIC. ACUTE EXPOSURE: NOT DETERMINED

.CHRONIC EXPOSURE: N/A

.FIRST AID: TREAT SYMPTOMATICALLY.

SKIN CONTACT--

.IRRITANT/TOXIC. ACUTE EXPOSURE: NOT DETERMINED

.CHRONIC EXPOSURE: N/A

.FIRST AID: TREAT SYMPTOMATICALLY.

EYE CONTACT--

.IRRITANT. ACUTE EXPOSURE: NOT DETERMINED

.CHRONIC EXPOSURE: N/A

.FIRST AID: TREAT SYMPTOMATICALLY.

INGESTION--

.HIGHLY TOXIC. ACUTE EXPOSURE: NOT DETERMINED

.CHRONIC EXPOSURE: N/A

.FIRST AID: SEEK MEDICAL ASSISTANCE.

\*\*\*\*\* SECTION VI (REACTIVITY DATA) \*\*\*\*\*

REACTIVITY: NOT DETERMINED

INCOMPATIBILITIES: NOT DETERMINED

DECOMPOSITION: NOT DETERMINED

POLYMERIZATION: NOT DETERMINED

\*CONDITION TO AVOID: NONE DETERMINED

\*\*\*\*\* SECTION VII (SPILL OR LEAK PROCEDURES) \*\*\*\*\*

ALL: VACUUM OR SWEEP SPILLAGE. PLACE SPILLAGE IN APPROPRIATE CONTAINER FOR WASTE DISPOSAL. VENTILATE AREA AND WASH SPILL SITE.

DISPOSAL: ALTHOUGH THIS COMPOUND IS NOT DEFINED OR DESIGNATED AS HAZARDOUS WASTE, DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER. OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

\*\*\*\*\* SECTION VIII (SPECIAL PROTECTION INFORMATION) \*\*\*\*\*

THE FOLLOWING INFORMATION ASSUMES LARGE QUANTITIES OF THE PRODUCT SUCH AS MIGHT BE ENCOUNTERED IN WAREHOUSE STORAGE OR AN INDUSTRIAL ACCIDENT.

VENTILATION: ADEQUATE, LOCAL EXHAUST

FIREFIGHTING: SELF-CONTAINED BREATHING APPARATUS SHOULD BE USED WHEN FIGHTING FIRES INVOLVING A CHEMICAL.

CLOTHING: PROTECTIVE

GLOVES: RUBBER

EYE PROTECTION: SAFETY GLASSES

RESPIRATORY PROTECTION: NIOSH/MSHA-APPROVED

\*\*\*\*\* SECTION IX (STORAGE AND HANDLING PRECAUTIONS) \*\*\*\*\*

SPECIAL PRECAUTIONS: STORE IN A TIGHT CONTAINER AS DEFINED IN THE UNITED STATES PHARMACOPEIA. THIS MATERIAL SHOULD BE HANDLED AND STORED PER LABEL AND OTHER INSTRUCTIONS TO ENSURE PRODUCT INTEGRITY.

\*\*\*\*\* SECTION X (TRANSPORTATION AND SHIPPING REQUIREMENTS) \*\*\*\*\*

THIS PRODUCT DOES NOT POSE AN UNREASONABLE RISK TO HEALTH AND SAFETY OR PROPERTY WHEN TRANSPORTED IN COMMERCE. THE HAZARD CLASS DEFINITIONS OF 49CFR, PART 173 ARE NOT APPLICABLE TO THIS PRODUCT.

\*\*\*\*\*  
THE INFORMATION CONTAINED HEREIN IS FURNISHED WITHOUT WARRANTY OF ANY KIND. THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHOULD BE USED ONLY AS A GUIDE. USERS SHOULD MAKE INDEPENDENT DETERMINATIONS OF THE SUITABILITY AND COMPLETENESS OF INFORMATION FROM ALL SOURCES TO ASSURE PROPER USE AND DISPOSAL OF THESE MATERIALS AND THE SAFETY AND HEALTH OF EMPLOYEES AND CUSTOMERS.  
\*\*\*\*\*

APPROVED:

BY: E.K./T.K.

DATE: 1/17/92

FOR INTERNAL USE ONLY

Exhibit 1B

MSDS - Drug Product

MATERIAL SAFETY DATA INFORMATION

23-JUN-1995

\*\*\*\*\* SECTION I \*\*\*\*\*

MANUFACTURER/SOURCE OF INFORMATION: ALCON LABORATORIES, INC.  
EMERGENCY TEL: 817-551-4444  
ADDRESS: 6201 SOUTH FREEWAY, FORT WORTH, TEXAS 76134

CHEMICAL NAME AND SYNONYMS:  
AL04862 1% WITH TYLOXAPOL;

CAS NO.: AP0001032

PRODUCT CODE:

PMA/NDA NO.:

CERCLA HAZARD RATINGS (SCALE 0-3):

HEALTH-N/A

FIRE-N/A

REACTIVITY-N/A

PERSISTENCE-N/A

\*\*\*\*\* SECTION II (COMPONENTS AND CONTAMINANTS) \*\*\*\*\*

PERCENTAGE:

COMPONENT:

MANNITOL, USP

TYLOXAPOL, NF

DISODIUM USP

AL04862,

SODIUM CHLORIDE, USP

BENZALKONIUM CHLORIDE, NF

SODIUM HYDROXIDE, NF

PURIFIED WATER, USP

FORMULATION PROPRIETARY: WE WILL MAKE THIS INFORMATION AVAILABLE TO MEDICAL PERSONNEL IN CASE OF AN EMERGENCY.

EXPOSURE LIMITS: NOT DETERMINED

\*\*\*\*\* SECTION III (PHYSICAL DATA) \*\*\*\*\*

HAZARD DESCRIPTION: OFF-WHITE AQUEOUS SUSPENSION

BOILING POINT: N/A

MELTING POINT: N/A

SPECIFIC GRAVITY: N/A

VAPOR PRESSURE: N/A

EVAPORATION RATE: N/A

SOLUBILITY IN WATER: ALL COMPONENTS ARE WATER SOLUBLE EXCEPT AL04862.

VAPOR DENSITY: N/A

\*\*\*\*\* SECTION IV (FIRE AND EXPLOSION HAZARD DATA) \*\*\*\*\*

·E AND EXPLOSION HAZARD: THIS MATERIAL SHOULD NOT PRESENT A FIRE OR EXPLOSION HAZARD.

FLASH POINT: N/A

UPPER EXPLOSION LIMIT: N/A

LOWER EXPLOSION LIMIT: N/A

FIREFIGHTING MEDIA: USE EXTINGUISHING MEDIA APPROPRIATE FOR THE SURROUNDING FIRE CONDITIONS.

FIREFIGHTING: WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING.

TOXIC GASES PRODUCED: CARBON DIOXIDE, CARBON MONOXIDE, NITROGEN OXIDES AND SULFUR OXIDES.

\*\*\*\*\* SECTION V (HEALTH EFFECTS AND FIRST AID) \*\*\*\*\*

\*TOXICITY: ORAL LD50, RATS >300 MG/KG FOR ACTIVE INGREDIENT (THE AMOUNT CONTAINED IN 30ML OF OPHTHALMIC SUSPENSION).

MUTAGENICITY: HAS NOT BEEN DETERMINED.

INHALATION--

ACUTE EXPOSURE: DATA NOT AVAILABLE. COMPOUNDS OF THIS CLASS TYPICALLY ARE NOT AN ACUTE INHALATION HAZARD.

CHRONIC EXPOSURE: DATA NOT AVAILABLE

FIRST AID: REMOVE TO FRESH AIR. IF NOT BREATHING, PERFORM ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. OBTAIN APPROPRIATE MEDICAL ATTENTION.

SKIN CONTACT--

ACUTE EXPOSURE: DATA NOT AVAILABLE. COMPOUNDS OF THIS CLASS TYPICALLY ARE NOT A SKIN HAZARD.

CHRONIC EXPOSURE: DATA NOT AVAILABLE. NO SIGNIFICANT IRRITATION OR ALLERGIC SENSITIZATION OCCURRED IN GUINEA PIGS EXPOSED TO AL04862.

FIRST AID: IMMEDIATELY FLUSH SKIN WITH COPIOUS AMOUNTS OF WATER. IN THE EVENT OF ANY ADVERSE EFFECTS, OBTAIN APPROPRIATE MEDICAL ATTENTION.

EYE CONTACT--

ACUTE EXPOSURE: SINGLE AND REPEATED DOSE STUDIES IN ANIMALS HAVE NOT SHOWN ANY SIGNIFICANT IRRITATION POTENTIAL. ACUTE EYE EXPOSURE MAY CAUSE MINIMAL CONJUNCTIVE IRRITATION.

CHRONIC EXPOSURE: REPEATED EYE EXPOSURE MAY CAUSE MINIMAL CONJUNCTIVE IRRITATION.

FIRST AID: IMMEDIATELY FLUSH EYES WITH COPIOUS AMOUNTS OF WATER. IN

THE EVENT OF ANY ADVERSE EFFECTS, OBTAIN APPROPRIATE MEDICAL ATTENTION.

INGESTION--

.ACUTE EXPOSURE: DATA NOT AVAILABLE. COMPOUNDS OF THIS CLASS TYPICALLY DO NOT PRESENT AN ACUTE HAZARD BY THIS ROUTE.

.CHRONIC EXPOSURE: NOT FULLY CHARACTERIZED. DRUGS OF THIS CLASS HAVE BEEN ASSOCIATED WITH ANOREXIA, NAUSEA, VOMITING, MALAISE, FATIGUE, DROWSINESS, HEADACHE, VERTIGO, MENTAL CONFUSION, PARESTHESIA, AND OCCASIONAL HEMATOLOGIC REACTIONS.

.FIRST AID: INDUCE VOMITING. OBTAIN MEDICAL ATTENTION.

\*\*\*\*\* SECTION VI (REACTIVITY DATA) \*\*\*\*\*

REACTIVITY: STABLE

INCOMPATIBILITIES: NONE OTHER THAN WATER ALONE WOULD PRODUCE.

DECOMPOSITION: WHEN HEATED TO DECOMPOSITION, MATERIAL EMITS TOXIC FUMES.

POLYMERIZATION: WILL NOT OCCUR

CONDITION TO AVOID: THIS MATERIAL IS STABLE FROM A SAFETY POINT OF VIEW.

\*\*\*\*\* SECTION VII (SPILL OR LEAK PROCEDURES) \*\*\*\*\*

SPILL: WEAR APPROVED RESPIRATOR AND CHEMICALLY COMPATIBLE GLOVES. VACUUM OR SWEEP UP SPILLAGE. PLACE SPILLAGE IN APPROPRIATE CONTAINER FOR WASTE DISPOSAL. VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

DISPOSAL: DISPOSE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS. THIS PRODUCT DOES NOT MEET THE DEFINITION OF HAZARDOUS WASTE AS DEFINED IN 40CFR, PART 261.11.

\*\*\*\*\* SECTION VIII (SPECIAL PROTECTION INFORMATION) \*\*\*\*\*

THE FOLLOWING INFORMATION ASSUMES LARGE QUANTITIES OF THE PRODUCT SUCH AS MIGHT BE ENCOUNTERED IN WAREHOUSE STORAGE OR AN INDUSTRIAL ACCIDENT.

VENTILATION: USE GENERAL OR LOCAL EXHAUST

FIREFIGHTING: SELF-CONTAINED BREATHING APPARATUS SHOULD BE USED WHEN FIGHTING FIRES INVOLVING A CHEMICAL.

PROTECTIVE CLOTHING: APPROPRIATE LABORATORY APPAREL, PROTECT EXPOSED SKIN.

GLOVES: RUBBER

PROTECTION: SAFETY GOGGLES

RESPIRATORY PROTECTION: NIOSH/MSHA-APPROVED

\*\*\*\*\* SECTION IX (STORAGE AND HANDLING PRECAUTIONS) \*\*\*\*\*

SPECIAL PRECAUTIONS: STORE IN A TIGHT CONTAINER AS DEFINED IN THE UNITED STATES PHARMACOPEIA. THIS MATERIAL SHOULD BE HANDLED ~~AND STORES PER LABEL AND OTHER INSTRUCTIONS TO ENSURE PRODUCT INTEGRITY.~~

OTHER PRECAUTIONS: AVOID BREATHING DUST OR MIST. USE WITH ADEQUATE DUST CONTROL. WASH THOROUGHLY AFTER HANDLING. ~~DO NOT PERMIT EATING, DRINKING OR SMOKING NEAR MATERIAL.~~

\*\*\*\*\* SECTION X (TRANSPORTATION AND SHIPPING REQUIREMENTS) \*\*\*\*\*

THIS PRODUCT DOES NOT POSE AN UNREASONABLE RISK TO HEALTH AND SAFETY OR PROPERTY WHEN TRANSPORTED IN COMMERCE. THE HAZARD CLASS DEFINITIONS OF 49CFR, PART 173 ARE NOT APPLICABLE TO THIS PRODUCT.

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APPROVED:

R&D: E.D./R.H./R.J./T.K.

DATE: 6/22/95

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