

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

DISTRIBUTOR'S NAME:	ADENA TECHNOLOGIES	REGULAR TELEPHONE NO: EMERGENCY TELEPHONE NO. ONLY IN THE EVENT OF CHEMICAL EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT INVOLVING CHEMICAL.	(888) 247-2312 ChemTrec (800) 424-9300
ADDRESS:	101 Technology Lane, Export, PA 15632		
TRADE NAME:	ADENA 6002		
SYNONYMS:	ADENA 6002 is a cooling tower microbicide		
SHIPPING NAME, DOT:	Not Regulated		
DOT HAZARD CLASS:	Nonhazardous		
HMIS Data:	HEALTH = 1, FLAMMABILITY = 0, REACTIVITY = 0, PPE = C		

II. HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	CAS NO.	%	TWA/TLV
Poly[oxyethylene(dimethyliminio)ethylene(dimethyliminio)ethylene dichloride]	31075-24-8	15	N/A

III. PHYSICAL DATA

BOILING POINT, 760 MM HG, °F:	NA	MELTING POINT, °F:	NA
SPECIFIC GRAVITY	1.03-1.04	VAPOR PRESSURE:	NE
VAPOR DENSITY (AIR = 1):	NE	SOLUBILITY IN H₂O % BY WT:	COMPLETE
% VOLATILES BY VOL:	75 (water)	EVAPORATION RATE (BUTYL ACETATE = 1):	NE
APPEARANCE AND ODOR:	Clear Amber/Mild Odor	pH (AS IS): pH (1% soln.):	6-7

IV. FIRE AND EXPLOSION DATA

FLASH POINT: (TEST METHOD)	>212F (TCC)	AUTOIGNITION TEMPERATURE:	N/A		
FLAMMABLE LIMITS IN AIR, % BY VOLUME:	Not Known	LOWER:	N/A	Upper:	N/A
EXTINGUISHING MEDIA	Carbon Dioxide, Dry Chemical, Water Spray				
SPECIAL FIRE FIGHTING PROCEDURES:	None				
UNUSUAL FIRE AND EXPLOSION HAZARD:	None				

V. PRECAUTIONARY LABEL INFORMATION AS PRESCRIBED BY USEPA

CAUTION: Harmful if swallowed. Avoid breathing vapors. Avoid contact with skin, eyes, or clothing. Avoid contact with skin, eyes, or clothing.

STATEMENT OF PRACTICAL TREATMENT (FIRST AID): If swallowed: DO NOT INDUCE VOMITING. Rinse with copious amounts of water first. Irrigate the esophagus and dilute the stomach content by slowly giving one or two glasses of water. Avoid giving alcohol or alcohol related products. In cases where the individual is semi-comatose, comatose, or convulsing, DO NOT GIVE FLUIDS BY MOUTH. In case of internal ingestion of the product, seek medical assistance immediately; take individual to nearest medical facility. If in eyes: rinse with large amounts of water. If irritation occurs, seek

medical attention. If inhaled: move person to a well ventilated place and apply artificial respiration, if required. Call a physician.

ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

VI. FIRST AID INFORMATION

Eye exposure: Flush immediately with copious amounts of tap water or normal saline (minimum of 15 minutes). Take exposed individual to a health care professional, preferably an ophthalmologist, for further evaluation.

Skin exposure: Wash exposed area with plenty of soap and water. Repeat washing. Remove contaminated clothing and wash thoroughly before reuse. If irritation persists consult a health care professional.

Inhalation: If exposure by inhalation is suspected, immediately move exposed individual to fresh air. If individual experiences nausea, headache, dizziness, has difficulty in breathing or is cyanotic, seek a health care professional immediately.

Ingestion: DO NOT INDUCE VOMITING. Rinse mouth with copious amounts of water or milk, first. Irrigate the esophagus and dilute stomach contents by slowly giving one or two glasses of water or milk. Avoid giving alcohol or alcohol related products. In cases where the individual is semi-comatose, comatose or convulsing, DO NOT GIVE FLUIDS BY MOUTH. In case of intentional ingestion of the product seek medical assistance immediately; take individual to the nearest medical facility.

NOTE TO PHYSICIAN: No specific antidote is known. Treat symptoms.

VII. PRIMARY ROUTES OF EXPOSURE

1. Effects from Acute Exposure:

Eye exposure: Mild irritant. Effects may range from none to mild depending on the length of exposure, solution concentration and first aid measures.

Skin exposure: None-irritating to the skin.

Inhalation: May cause irritation or corrosion of mucous membranes and the lungs. Exposed individuals should be monitored for respiratory distress, bronchitis or pneumonia.

Ingestion: Ingestion is not expected to be a primary route of exposure.

2. Effects from Chronic Exposure:

The effects from chronic exposure to this product have not been fully evaluated.

VIII. TOXICOLOGICAL INFORMATION

Acute effects: Oral LD50: Male: 19,510 mg/kg, Female: 25,870 mg/kg

Acute Dermal LD50: > 2000 mg/kg

Acute Inhalation LC50: 29 mg/kg

Irritant effects: Mild transient irritation

Sensitization effects: No evidence of sensitization.

Carcinogenic potential: A two year rat carcinogenicity study showed a slight increase in c-cell adenomas in female rats. Studies with male rats and male and female mice did not show any evidence of carcinogenic response. This product is not considered a carcinogen. Not listed in the OSHA Standard, Section 1910.1200 as a carcinogen.

Target Organ Effects: Eyes (irritation) are expected to be the primary target organ of this product.

Other Health Effects: Mutagenicity studies were negative.

IX. ENVIRONMENTAL TOXICOLOGICAL INFORMATION

Acute Aquatic LC50's

48 hr Daphnia Magna: 2.22 mg/L

96 hr Fathead minnow: 1.56 mg/L

96 hr Bluegill sunfish: 1.21 mg/L

96 hr Rainbow trout: 0.30 mg/L

Acute Marine LC50's

96 hr Sheepshead minnow: > 3600 mg/L

96 hr Mysid Shrimp: 78 mg/L
96 hr Quahog clam: 2.1 mg/L

Avian Acute Oral LD50's
Mallard ducks: 4830 mg/kg
Bobwhite quail: 6600 mg/kg
Avian Dietary LC50's
Mallard ducks: > 33,000 ppm
Bobwhite quail: > 120,000 ppm

X. REACTIVITY INFORMATION

Stability: Stable under ordinary conditions of use and storage.

Incompatibility: Anionic polymers.

Hazardous Decomposition Products: Unknown, but carbon monoxide may be released on burning.

XI. HANDLING PRECAUTIONS

Eyewash fountains in the work area are recommended. Rubber gloves, indirect ventilation goggles, body-protective clothing, and rubber safety shoes are required. The handling precautions for this product are based on the characteristics of the neat product unless otherwise specified.

XII. SPILL, LEAK, AND DISPOSAL PROCEDURES

SPILL AND LEAK RESPONSE GUIDELINES

Important: Before responding to a spill or leak of this product, review each section of this MSDS. Follow the recommendations given in the Handling Precautions sections. Check the Fire and Explosion Data section to determine if the use of non-sparking tools is merited. Insure that spilled or leaked product does not come into contact with materials listed as incompatible. If irritating fumes are present, consider evacuation of enclosed areas.

Emergency Response

Initially, minimize area affected by the spill or leak. Block any potential routes to water systems (e.g., sewers, streams, lakes, etc.). Based on the product's toxicological and chemical properties, and on the size and location of the spill or leak, assess the impact on contaminated environments (e.g. water systems, ground, air equipment, etc.). There are no methods available to completely eliminate any toxicity this product may have on aquatic environments. Minimize adverse effects on these environments. Determine if federal, state, and/or local release notification is required (see Regulatory Classifications section of this MSDS). Recover as much of the pure product as possible into appropriate containers. Later, determine if this recovered product can be used for its intended purpose. Address clean-up of contaminated environments. Spill or leak residuals may have to be collected and disposed of. Clay, soil, or commercially available absorbents may be used to recover any material that can not readily be recovered as pure product. Flushing residual material to an industrial sewer, if present at the site of a spill or leak incident may be acceptable if authorized approval is obtained. If product and/or spill/leak residuals are flushed to an industrial sewer, insure that they do not come into contact with incompatible material. Contact the person(s) responsible for the operation of your facility's industrial sewer system prior to intentionally flushing or pumping spills or leaks of this product to the industrial sewer.

Disposal Guidelines

Note: Follow federal, state, and local regulations governing the disposal of waste materials.

Contaminated Materials: Determine if waste containing this product can be handled by available industrial effluent system or other on-site waste management unit. If off-site management is required, contact a company experienced in industrial waste management. This product is not specifically listed in 40 CFR 261 as a Resource Conservation and Recovery Act (RCRA) hazardous waste. However, spill or leak residuals may meet the criteria of a characteristic hazardous waste under this Act. Check the characteristics of the material to be disposed of and/or the physical and reactivity data given in this MSDS for the neat product.

Container Disposal: Empty containers, as defined by appropriate sections of the RCRA, are not RCRA hazardous wastes. However, insure proper management of any residuals remaining in container.

XIII. TRANSPORTATION AND SHIPPING INFORMATION

DOT Shipping Name: Not regulated.

XIV. REGULATORY INFORMATION

The following Regulations are known to apply to the use and disposal of this product. Additional Federal, State and Local regulations may also be applicable.

SARA (Superfund Amendments and Reauthorization Act):

SARA 302 Extremely Hazardous Substances List: No components of this product are listed.

SARA 312 Hazard Category: Immediate (Acute) Health Hazard

SARA 313 Toxic Chemicals List: No Section 313 listed substances are present above *de minimus* levels.

CERCLA (Comprehensive Environmental Response, Compensation and Liability Act): No components of this product are listed.

RCRA (Resource Conservation and Recovery Act) Listed Hazardous Wastes: No components of this product are listed.

CWA (Clean Water Act) Listed Substances: No components of this product are listed.

FDA (Food and Drug Administration): This product is not approved for food contact uses.

TSCA (Toxic Substances Control Act) Applicability: Registered pesticides are exempt from the requirements of TSCA.

All components are listed on TSCA Inventory.

FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act): This product is a registered pesticide. EPA Reg. No. 1448-32

HMIS/NPCA Ratings: Health 1; Flammability 0; Reactivity 0

NFPA Ratings: Health 1; Flammability 0; Reactivity 0

STATE REGULATIONS

Various State Right to Know Acts: Non-proprietary hazardous chemicals are listed in Section 2 of this MSDS.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. ADENA TECHNOLOGIES ASSUMES NO RESPONSIBILITY FOR PERSONAL INJURY OR PROPERTY DAMAGE TO USERS OR THIRD PARTIES CAUSED BY THE MATERIAL. USERS ASSUME ALL RISKS ASSOCIATED WITH THE USE OF THE MATERIAL.

