

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 6001		
SYNONYMS:	ADENA 6001 is a cooling lower microbicide		
SHIPPING NAME, DOT:	UN1719 , CAUSTIC ALKALI LIQUID, N.O.S., (contains Potassium N-Methyldithiocarbamate), Class 8, P.G. III, (ERG GUIDE 154)		
DOT HAZARD CLASS:	Corrosive, 8		
HMS Data:	HEALTH = 1, FLAMMABILITY = 0, REACTIVITY = 0, PPE = C		
OSHA HAZARDS	Corrosive to skin and eyes. Toxic by ingestion or dermal absorption.		
Revision Date/Preparer	3/21/2013/Dean Norwood, Chemist		

II. HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	CAS NO.	%	TWATLV
Disodium cyanodithioimidocarbonate	138-93-2	3.68	Not available
Potassium N-methyldithiocarbamate	137-41-7	5.07%	Not available
Inert Ingredients		91.25%	Not applicable

III. PHYSICAL DATA

BOILING POINT, 760 MM HG, °F:	212°F	MELTING POINT, °F:	Not applicable
SPECIFIC GRAVITY	1.05	VAPOR PRESSURE:	Not established
VAPOR DENSITY (AIR = 1):	Not established	SOLUBILITY IN H ₂ O % BY WT:	COMPLETE
% VOLATILES BY VOL:	75 (water)	EVAPORATION RATE (BUTYL ACETATE = 1):	Not established
APPEARANCE AND ODOR:	Clear orange liquid with a sharp sulfide odor	pH (AS IS): pH (1% soln.):	10.0-12.5

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:	Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.		
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

ADENA 6001

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:

Very hazardous in case of eye contact (irritant, corrosive). Inflammation of the eye is characterized by redness, watering and itching.

Hazardous in case of skin contact (irritant, sensitizer). Non-corrosive to skin. Skin contact may produce burns. Skin inflammation is characterized by itching, scaling, reddening or, occasionally, blistering.

May be harmful if inhaled. Do not breathe spray mists of the product. Effects will depend upon solution strength and length of time of exposure.

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:

Very hazardous in case of eye contact (irritant, corrosive). Inflammation of the eye is characterized by redness, watering and itching.

Acute Oral (LD50) = 2030 mg/kg Rat

Acute Dermal (LD50) = 2990 mg/kg Rabbit

Irritant / Sensitization Effects:

Hazardous in case of skin contact (irritant, sensitizer). Non-corrosive to skin. Skin contact may produce burns. Skin inflammation is characterized by itching, scaling, reddening or, occasionally, blistering.

May be harmful if inhaled. Do not breathe spray mists of the product. Effects will depend upon solution strength and length of time of exposure.

Target Organs Effects:

May cause damage to the following organs: upper respiratory tract, skin, eyes.

Other Health Effects:

This product has been shown to be a weak sensitizer according to animal data. No instances of human sensitization are known. 90 day exposure studies did not reveal any adverse effects. This product has tested positive in several in vitro mutagenicity assays.

IX. ENVIRONMENTAL TOXICOLOGICAL INFORMATION

Acute Aquatic LC50's

LC50 = 6.8 mg/l 48 hours *Daphnia magna*

LC50 = 7.2 mg/l 96 hours Rainbow trout

LC50 = 1.2 mg/l 96 hours Fathead minnow

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.