

MATERIAL SAFETY DATA SHEET

I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME AK-450
MANUFACTURER Aqua Kinetics, Inc.
P. O. Box 249
Irwin, PA 15642
EMERGENCY PHONES: 800-255-3924 (Chemtell)
MSDS REVISION DATE: 01-12-10

II. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS NUMBER	CONCENTRATION (% by weight)
Water	7732-18-5	70
Disodium ethylenebis(dithiocarbamate)	142-59-6	15
Sodium dimethyldithiocarbamate	128-04-1	15
ETHYLENE THIOUREA	96-45-7	0.1 - 1

III. HAZARDS IDENTIFICATION

Emergency Overview: EYE IRRITANT.
HARMFUL IF SWALLOWED.
SKIN IRRITANT.
Possible birth defect hazard.
Green Yellow Liquid Sulfur odor.

Eye: Will cause skin irritation.

Skin Contact: Repeated or prolonged skin contact may result in moderate irritation.

Inhalation: May cause irritation to eyes and respiratory system.

Ingestion: May cause nausea, vomiting and diarrhea.

(continued on page 2)

IV. FIRST AID MEASURES

- Eye:** Immediately irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 minutes. Obtain immediate medical attention. Take exposed individual to a healthcare professional, preferably and ophthalmologist, for further evaluation.
- Skin contact:** Immediately flush with large amounts of water for 15-20 minutes; if symptoms develop, obtain medical attention.
- Inhalation:** Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention.
- Ingestion:** If swallowed, DO NOT induce vomiting. Keep at rest. DO NOT attempt to give anything by mouth to an unconscious person.

V. FIREFIGHTING MEASURES

- Autoignition:** Not available.
- Flash Point:** Greater than >212 F.
- Extinguishing Media:** Foam, water spray or fog, CO₂, Dry chemical.
- Special Firefighting Procedures:** Fire fighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.
- Fire and Explosion Hazards:** Non-combustible.
- Hazardous Decomposition Products:** Thermal decomposition could result in the formation of oxides of carbon, nitrogen and sulfur. May evolve hydrogen sulfide.
- Lower Explosion Limit (%):** Not applicable.
- Upper Explosion Limit (%):** Not applicable.

VI. ACCIDENTAL RELEASE MEASURES

- Spill and Leak Procedures:** Absorb spillages onto sand, earth or any suitable absorbent material. Sweep up and shovel into waste drums. Wash the spillage area with water. Washings must be prevented from entering surface water drains. Disposal should be in accordance with local, state or national legislation.

For safety and environmental precautions, please review entire Material Safety Data Sheet for necessary information.

(continued on page 3)

VII. HANDLING AND STORAGE

Storage Temperature: 40- 100 degrees F.
Handling/Storage: Protect from freezing. Keep away from acids.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation Requirements: Provide local exhaust or general dilution ventilation to meet published exposure limits. Ventilation equipment must be explosion-proof.

Eye Protection Requirements: Goggles.

Glove Requirements: Gloves are recommended due to possible irritation. Impervious neoprene or rubber gloves are recommended.

Clothing Requirements: Wear protective clothing (hat, long sleeve shirt, long pants and boots) when handling product.

Change/Removal of Clothing: Remove contaminated clothing and laundry before reuse.

Wash Requirements: Wash before eating, drinking, or using toilet facilities.

Respirator Requirements: Respiratory protection required if the exposure level is unknown or has been measured and found to exceed the published exposure limits.

IX. PHYSICAL AND CHEMICAL PROPERTIES

Pure Substance or Mixture:	Mixture
Physical Form:	Liquid
Color:	Green Yellow
Odor:	Sulfur
Odor Threshold:	Not available
pH as is:	Approximately 11
pH in 1 % Solution:	Not applicable
Oxidizing Properties:	Not applicable
Boiling Point:	Greater than 212 degrees F.
Melting/Freezing Point:	Approximately 32 degrees F.
Solubility in Water:	Soluble
Partition Coefficient (n-octanol/water):	Not applicable
Evaporation Rate:	1 (Water = 1)
Vapor Pressure:	17.5 @ 20 degrees C
Vapor Density (air =1):	> 1.0
Volatiles:	None
Volatile Organic Compounds:	Not available
Autoignition:	Not available
Flash Point:	Greater than 212 degrees F.

(continued on page 4)

X. STABILITY AND REACTIVITY

Stability: Stable.
Materials to Avoid: Strong oxidizers, metals and their salts, acids.
Conditions to Avoid: Protect from temperatures below 40 degrees F.
Hazardous Decomposition Products: Thermal decomposition could result in the formation of oxides of carbon, nitrogen, and sulfur. May evolve hydrogen sulfide. Carbon disulfides and amines may be generated on acidification.
Hazardous Polymerization Conditions: Not applicable.

XI. TOXICOLOGICAL INFORMATION

Route of Entry: Eye contact, skin contact.
Carcinogenicity: There is no evidence that this product poses a carcinogenic risk under normal conditions of handling and use.

PRODUCT TOXICOLOGY:

Effects of Acute Exposure: Unlikely to cause harmful effects under normal conditions of handling and use.

Chronic (Long Term) Effects of Exposure:

Target Organs: Not applicable.
Possible Birth Defect Hazard: Yes

NOTES ON ORAL TOXICITY

May cause nausea, vomiting and diarrhea, highly toxic.

NOTES ON DERMAL TOXICITY

Repeated or prolonged skin contact may result in mild irritation.

NOTES ON INHALATION TOXICITY

Vapors and/or aerosols which may be formed at elevated temperatures may cause systemic effects. The vapor has anesthetic properties and when inhaled at concentrations above the occupational exposure limit, it may cause respiratory irritation, headache, fatigue, dizziness and incoordination.

NOTES ON EYE IRRITATION

Irritating, but does not injure eye tissue.

(continued on page 5)

XII. ECOLOGICAL INFORMATION

Potential Effect on Environment: Do not apply (for use) in estuarine oil fields where drilling fluids (mud) are discharged to the surface water.

Mobility: The product is soluble in water.

Potential to Bioaccumulate: Unknown.

Ecotoxicity: Very toxic to fish.

Aquatic Toxicity: High.

XIII. DISPOSAL CONSIDERATIONS

Waste Disposal Methods: Disposal should be in accordance with local, state or national legislation.

Empty Container Warnings: Container should be triple rinsed (or equivalent). Then offered for recycling or reconditioning, or punctured and disposed of in a sanitary landfill or by other approved state and local regulations.

XIV. TRANSPORTATION INFORMATION

This section provided for general information only. The shipping description below may not represent requirements for all modes of transportation, packaging, shipping methods or locations outside of the United States.

FOR MORE COMPLETE TRANSPORTATION REGULATORY INFORMATION
PLEASE REFER TO THE SHIPPING DOCUMENTS ACCOMPANYING THE
SHIPMENT OF THIS PRODUCT.

DOT CLASSIFICATION Not applicable.
SUB. HAZARD CLASS

The information provided herein may not include the impact of additional regulatory requirements (eg, for materials meeting the definition of a hazardous waste under RCRA, hazardous substances under CERCLA, and/of marine pollutants under CWA or other similar federal, state or local laws) or any associated exceptions or exemptions under regulations applicable to the transport of this material.

(continued on page 6)

XV. REGULATORY INFORMATION

TSCA - This product is subject to regulation under the U. S. Federal Fungicide, Insecticide and Rodenticide Act (FIFRA) and is therefore exempted under the US Toxic Substance Control Act (TSCA) Inventory listing requirements.

FIFRA - Federal Fungicide, Insecticide and Rodenticide Act – 7 U.S.C. s/s 136 et seq. (1996)
FIFRA Registration Number 31910-02
FIFRA Use In all cases, follow instructions on the product label.

SARA - Section 312 (EPCRA Tier II SARA Title III Section 312 – Acute, chronic hazard.

Section 313 (Superfund Amendments and Reauthorization Act of 1986 – 40 CFR 372)

	CAS #	CONCENTRATION (% by weight)
Active ingredients	Proprietary	30

XV. OTHER INFORMATION

HMIS Hazard Ratings

HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS ratings are not required on MSDS by OSHA's 29 CFR 1910.1200, we choose to provide them as a service to our customers using HMIS. These ratings are to used only with a fully implemented HMIS program. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

NPCA recommends that employers must determine appropriate PFE for the actual conditions under which this product is used in their workplace. For information on PFE codes, consult the HMIS Implementation Manual.

When two ratings are provided for Health, the first represents the material 'as supplied', and the second represents the material 'in use'.

Health - 2 Flammability - 0 Reactivity - 0

The information given and the recommendations made herein apply to our product(s) alone and are not combined with other product(s). Such are based on our research and on data from other reliable sources and are believed to be accurate. No guaranty of accuracy is made. It is the purchaser's responsibility before using any product to verify this data under their own operating conditions and to determine whether the product is suitable for their purposes.