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MSDS COVER SHEET

Pages including cover sheet: 8

Product Name: **Activator**

Catalog Number: **30-3140-XX, 30-3142-XX**

Product Description: 5-(Ethylthio)-1H-tetrazole in
Acetonitrile

Glen Research Corporation provides Material Safety Data Sheets (MSDS) based on the hazardous components of each product.

Components and MSDS attached

Acetonitrile (97%)	CAS number	75-05-8
5-Ethylthiotetrazole (3%)	CAS number	89797-68-2

Emergency First Aid:

- Ingestion: Call poison control center for assistance. Get emergency medical assistance. If conscious, and alert, give 2-4 cupfuls of water or milk. Never induce vomiting or give anything by mouth to a victim who is unconscious or having convulsions. Trained persons may administer amyl nitrate by inhalation as antidote where stupor or unconsciousness occurred.
- Eye contact: Rinse with copious amounts of water for at least 15 minutes. Get emergency medical assistance.
- Skin contact: Flush thoroughly with water for at least 15 minutes. Wash affected skin with soap and water. Remove contaminated clothes and shoes. Wash clothing before reuse. Get emergency medical assistance.
- Inhalation: Immediately remove to fresh air. If not breathing, give artificial respiration. Keep patient warm and at rest. Get emergency medical assistance.

Section VII: Special Protection

Ventilation: Adequate ventilation is required to control vapors and odor.

Respiratory Protection: Use approved respiratory equipment. Follow NIOSH and equipment manufacturer's recommendations to determine appropriate equipment.

Skin Protection: Protective rubber gloves and clothing are recommended. The choice of material must be based on chemical resistance and other user requirements.

Eye Protection: Laboratory safety glasses are minimum protection. Goggles are preferred.

Emergency eye wash fountains and safety showers should be available in the vicinity of any potential exposure. Ground and bond metal containers to minimize sparks.

Section VIII: Spill and Disposal Procedures

Wear protective clothing and use approved respiration equipment. If a spill occurs, protect from ignition. Use water spray to dilute spill to a non-flammable mixture. Ventilate area of spill. Absorb spilled material in an absorbent recommended for solvent spills and scoop with a nonsparking tool. Remove waste to a safe location for disposal by approved methods. If released to the environment, comply with all regulatory notification requirements.

Waste Disposal: Dispose of acetonitrile as an EPA Hazardous Waste.

Section IX: Storage

Acetonitrile should be stored in a cool area away from ignition sources, combustibles and oxidizing materials. Protect from temperature extremes and direct sunlight.

This chemical is subject to the notification requirements of section 313 of the Emergency Planning and Community Right-to-Know Act of 1986. This law requires certain manufacturers to report on annual emissions of specified toxic chemical and chemical categories.

The information provided herein is based on sources believed to be reliable as of 4/5/01 and pertains only to the material designated. Glen Research Corporation makes no warranty or representation to its completeness, accuracy, or currency. This material is intended for use by persons with pertinent technical skills and at their discretion and risk. It is the responsibility of the user to determine the product's suitability for its intended use, the product's safe use, and the product's proper disposal. Disposal of hazardous material may be subject to federal, state or local laws or regulations.

Key:

ca: Approximately

PEL: Permissible Exposure Level

STEL: Short Term Exposure Level

TWA: Time Weighted Average

IDLH: Immediately Dangerous to Life and Health

BuAc: Butyl Acetate

TLV: Threshold Limit Value

n/a: not available



Material Safety Data Sheet

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Section I: Identification & Information

Name: 5-Ethylthio-1H-Tetrazole Chemical Family: Heterocycle

Synonyms: EthylthioTetrazole
Formula: $C_3H_6N_4S$ M.W.: 130.17

DOT Proper Shipping Name: 5-Ethylthio-1H-Tetrazole
DOT Identification No.: n/a CAS No.: 89797-68-2
DOT Hazard Class: n/a

Section II: Physical Properties

Appearance: White crystals	Odor: Odorless
Vapor Pressure: n/a	Specific Gravity ($H_2O=1$): n/a
Vapor Density (air=1): n/a	Percent Volatiles by volume: n/a
Evaporation Rate (Ether=1): n/a	Water Reactive: n/a
Stability: Stable	Solubility in H_2O : Slightly Soluble in hot H_2O
Boiling Point: n/a	Melting point: 83-86°C

Section III: Reactivity Hazard Data

Hazardous polymerization will not occur under normal conditions.
Stable under normal temperatures and pressures.

Conditions to avoid: Heat, sparks, open flame, poor ventilation. May explode if heated near melting point(83-86°C).

Materials to avoid: Metals and metal salts (may form explosive compounds), strong oxidizers and acids, acid chlorides, and acid anhydrides.

Hazardous decomposition products: Toxic fumes of carbon monoxide, carbon dioxide and nitrogen oxides.

Section IV: Fire and Explosion Hazard Data

Flash Point: n/a Autoignition temperature: n/a
Flammable Limits in air % by volume: Lower limit: n/a Upper limit: n/a

Extinguishing Media: Water spray, carbon dioxide, dry chemical, appropriate foam

Special Fire Fighting Procedures: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Use water spray to cool fire-exposed containers.

Unusual Fire and Explosion Hazards: Container explosions may occur under fire conditions. Emits toxic fumes under fire conditions. May explode if heated above melting point.

Section V: Hazardous Ingredients

Approx. 100% 5-Ethylthio-1H-Tetrazole

Section VI: Toxicity and Health Hazard Data

See Registry of Toxic Effects of Chemical Substances (RTECS).
The toxicological properties of 5-Ethylthio-1H-Tetrazole have not been thoroughly investigated.

Primary routes of entry: Inhalation, ingestion, absorption

- Inhalation: Dust may cause irritation of the mucous membranes.
- Eye contact: Contact with dust may cause conjunctivitis.
- Skin contact: May cause irritation.
- Chronic exposure: May aggravate dermatitis, allergies, and respiratory disorders such as emphysema or asthma.

Target Organs: none identified

Emergency First Aid:

- Ingestion: If swallowed, wash out mouth with water provided person is conscious. Get emergency medical assistance.
- Eye contact: In case of contact immediately flush eyes with copious amounts of water for at least 15 minutes. Get emergency medical assistance.
- Skin contact: In case of contact immediately wash with soap and copious amounts of water. Remove contaminated clothing and shoes. Get emergency medical assistance.
 - Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get emergency medical assistance.

Section VII: Special Protection

Ventilation: Mechanical exhaust required.

Respiratory Protection: Use NIOSH-approved respirator. Avoid inhalation.

Skin Protection: Avoid contact with skin. Use gloves (rubber or neoprene) and appropriate protective clothing.

Eye Protection: Wear safety goggles. Faceshields preferred. Contact lenses should not be worn when working with this material.

Emergency eye wash fountains and safety showers should be available in the vicinity of any potential exposure.

Section VIII: Spill and Disposal Procedures

In case of spill: Ventilate area. Evacuate unnecessary personnel. Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves. Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Wash spill site after material pickup is complete.

Waste Disposal: Dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state and local regulations.

Section IX: Storage

Keep container tightly closed. Store in a cool dry place.

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