



**MATERIAL
SAFETY DATA
SHEET**

N-521 PAC 24

DATE: 06/13/2007

CAS NO: 533-74-4
SUPERSEDES: 05/01/2007

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: N-521 PAC 24
SYNONYMS: Tetrahydro-3,5-dimethyl-2H-1,3,5-thiadiazine-2-thione (DAZOMET) (24%)
CHEMICAL FAMILY: Thione
MOLECULAR FORMULA: C₅H₁₀N₂S₂
MOLECULAR WEIGHT: 162.27

VERICHEM, 3499 Grand Avenue, Pittsburgh, PA, USA, 15225 (412-331-7299, 8:30 am to 5:00 pm)
EMERGENCY PHONE: For any emergency involving spill, leak, fire, exposure, or accident call
CHEMTREC: 1-800-424-9300. Outside the USA and Canada call: 202-483-7616.

2. COMPOSITION/INFORMATION ON INGREDIENTS REGULATED COMPONENTS

COMPONENT	CAS NUMBER	PERCENT	WORKER EXPOSURE	REFERENCE
Tetrahydro-3,5-Dimethyl-2H-1,3,5-Thiadiazine-2-Thione	533-74-4	~24%	None Established	
Sodium Hydroxide	1310-73-2	(>2%)	Ceiling 2 mg/m ³	

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

APPEARANCE AND ODOR: Pale yellow to amber to green liquid with pungent odor.

EFFECTS OF OVEREXPOSURE: DANGER! CORROSIVE. CAUSES EYE AND SKIN DAMAGE. Harmful if swallowed, inhaled, or absorbed through the skin. May cause allergic skin reaction. Do not get in eyes, on skin, or clothing. Wear goggles or face shield, rubber gloves, and apron when handling. May form hazardous vapors on contact with water. Do not breathe spray or vapor mist. Use with adequate ventilation. Wash thoroughly after handling.

4. FIRST AID MEASURES (IN CASE OF CONTACT)

Call a Poison Center or a physician immediately. If a known exposure occurs or is suspected, immediately start the recommended procedures below. If further treatment is required, contact a Poison Center, a physician or the nearest hospital. Inform the person contacted of the type and extent of exposure, describe the victim's symptoms, and follow the advice given. **IF SWALLOWED:** Immediately give several glasses of water, but do not induce vomiting. This material is corrosive. If vomiting does occur, give fluids again. Have a physician determine if condition of patient will permit induction of vomiting or evacuation of stomach. Do not give anything by mouth to an unconscious or convulsing person. **IN CASE OF CONTACT:** Immediately flush eyes and skin with large amounts of running water for at least 15 minutes while removing contaminated clothing and shoes. For eyes, hold eyelids during the flushing to ensure rinsing of the entire surface of the eye and lids with water. Get medical attention immediately. Wash clothing before reuse. **INHALATION:** Remove from contaminated atmosphere. If breathing has eased, clear the victim's airway and start mouth-to-mouth, artificial respiration. If the victim is breathing, oxygen may be delivered from a demand-type or continuous-flow inhaler, preferably with a physician's advice. Get medical aid immediately.

5. **FIRE FIGHTING MEASURES**

FIRE HAZARD:

Product emits toxic gases under fire conditions. Runoff from fire control or dilution may cause pollution. This product may support combustion and decompose if in a fire and gives off toxic materials such as methyl isothiocyanate, Carbon disulfide, hydrogen sulfide, methylamine, formaldehyde, and oxides of sulfur, nitrogen, and carbon. Exercise caution when fighting fires involving chemical substances. Respiratory protection is required. Burning will produce toxic fumes. Cool hot containers with cool water. Vapors and products of combustion are irritating to the respiratory tract and may cause breathing difficulty and pulmonary edema. Symptoms may be delayed several hours or longer depending upon the extent of exposure. **EXTINGUISHING MEDIA AND FIRE FIGHTING INSTRUCTION**

As in any fire, prevent human exposure to fire, smoke, fumes or products of combustion. Evacuate non essential personnel from the fire area. Firefighters should wear full-face, self-contained breathing apparatus and impervious protective clothing. In case of fire use water fog, alcohol foam, carbon dioxide, or dry chemicals. Use standard fire-fighting techniques to extinguish fires involving this material. Use water spray, dry chemicals or carbon dioxide. Keep fire-exposed containers cool with a water spray to prevent rupture due to excessive heat. High pressure water hose may spread product from broken containers increasing contamination or fire hazard. Contaminated buildings, areas and equipment must not be used until they are properly decontaminated.

6. **ACCIDENTAL RELEASE MEASURES**

Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices. The recommendations described in this section are provided as general guidance for minimizing exposure when handling this product. Because use conditions will vary depending upon customer applications, specific safe handling procedures should be developed by a person knowledgeable of the intended use conditions and equipment. During the development of safe handling procedures, consideration should be given to the need for cleaning of equipment and piping systems to render them non hazardous before maintenance and repair activities are performed.

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Small spills can be handled routinely. Use adequate ventilation and/or wear a NIOSH approved dust, mist and fume respirator to prevent inhalation exposure. Wear protective clothing to prevent skin and eye contact. Use the following procedures: **Contain spill and collect onto an inert absorbent and place into suitable container.** Generously cover contaminated area with a slurry of common, powdered household laundry detergent and water. Using a stiff brush, work the slurry into cracks and crevices. Allow to stand for 2-3 minutes then flush with water. Repeat if necessary. Dike water for later disposal. Do not allow contaminated water to enter waterways.

7. **HANDLING AND STORAGE**

Containers should be stored in a cool, dry, well ventilated area away from flammable materials and sources of heat or flame. Store away from foodstuffs or animal feed. Exercise due caution to prevent damage to or leakage from the container. Guard against water contamination to prevent decomposition. It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not get into eyes, on skin or clothing. Avoid breathing vapor or mist. Use with adequate ventilation. Wash thoroughly after handling. Keep container closed when not in use.

8. **PERSONAL PROTECTION**

EYE PROTECTION REQUIREMENTS: Eye wash stations and safety showers in the work place are **STRONGLY recommended.** Chemical safety glasses or face shield. **SKIN PROTECTION REQUIREMENTS:** Chemical resistant gloves, long sleeve shirts and pants and chemical resistant shoes are required. **VENTILATION REQUIREMENTS:** Local and general exhaust ventilation to control levels of exposure. **RESPIRATOR REQUIREMENTS:** When misting may occur in the work area, a NIOSH approved respirator in accordance with OSHA respiratory protection requirements (29 CFR 1910.134). Air purifying particulate/organic vapor cartridge respirator.

9. **PHYSICAL AND CHEMICAL PROPERTIES**
APPEARANCE AND ODOR: Pale yellow to amber to green liquid with pungent odor.
BOILING POINT: 212°F - 100°C
BULK DENSITY: 9.59 lb/ US gal
EVAPORATION RATE: Similar to water
MELTING POINT: N/A
PERCENT VOLATILE (BY WEIGHT): 76%
pH: >13
SATURATION IN AIR (PERCENT BY VOLUME): UNKNOWN
SOLUBILITY IN WATER: Complete
VAPOR DENSITY: UNKNOWN
VAPOR PRESSURE: UNKNOWN

10. **STABILITY AND REACTIVITY**
 Stable at ambient temperatures and atmospheric pressure. Keep away from heat and flame.
Incompatibility: Strong acids, oxidizing agents, carbon steel. **Decomposition Products:** Carbon disulfide, hydrogen sulfide, methylamine, formaldehyde, methyl isothiocyanate, and oxides of sulfur, nitrogen, and carbon.

11. **TOXICOLOGICAL INFORMATION**
ACUTE EFFECTS
EYE: A rabbit study found the material to be corrosive to the eye. **SKIN CONTACT:** The primary skin irritation index (rabbits) is 7.0. **INGESTION:** Product oral LD₅₀ (rat): >1000 mg/kg,

12. **ECOLOGICAL INFORMATION**
FISH AND WILDLIFE
AQUATIC: This material is toxic to fish. Do not contaminate water sources by cleaning equipment or disposing of wastes.
 96 hr LC₅₀ (rainbow trout) 0.41 ppm
 96 hr LC₅₀ (blue gill sunfish): 2.48 ppm

13. **DISPOSAL CONSIDERATION**
 This product is toxic to fish. Material that can not be used as directed on the product label or chemically reprocessed and empty containers must be disposed of according to any applicable regulations. NOTE: State and local regulations may be more stringent than federal.

14. **TRANSPORT INFORMATION**
 This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

	DOT Shipping Information	IMO Shipping Information	ICAO/IATA	TRANSPORT CANADA
Shipping Name	Sodium Hydroxide Solution	N/A	Sodium Hydroxide Solution	Sodium Hydroxide Solution
Hazard Class	8	N/A	8	8
Packing Group	III	N/A	III	III
Subsidiary Class	----	N/A	----	----
UN/ID Number	UN 1824	N/A	UN 1824	UN 1824
Transport Label Required	Corrosive	N/A	Corrosive	Corrosive
Packing Instructions Passenger Cargo	Allowable	N/A	Allowable	Allowable
Max. Net Quantity Passenger Cargo	RQ<922 gal(8850lb) 819 821	N/A	5 liter max 60 liter quantities	RQ<922 gal(8850lb)
D.O.T. Hazardous Substances	Sodium Hydroxide	N/A	Sodium Hydroxide	Sodium Hydroxide
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15. REGULATORY INFORMATION

DOT: When shipped in a single package containing more than 922 gallons (8850 lbs.) this product contains a reportable quantity of Sodium Hydroxide and the shipping description should be preceded or followed by the letters "RQ".

TSCA: Pesticides are exempted by TSCA (the Toxic Substances Control Act), under Section 3(2)(a) ii, from the provisions of the Act.

CERCLA: Reportable quantity of EPA hazardous substances in products.
Chemical Name RQ
Sodium hydroxide 1000 lb

Product RQ: 50,000 lb (Notify EPA of product spills exceeding this amount.)

SARA TITLE III:

Section 302 Extremely Hazardous Substances: There are no SARA 302 Extremely Hazardous Substances in this product.

Section 311 and 312 Health and Physical Hazards:

IMMEDIATE (YES)	DELAYED (YES)	FIRE (YES)	PRESSURE (NO)	REACTIVITY (NO)
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Section 313 Toxic Chemicals:

Chemical Name:	CAS #	% by Weight
Tetrahydro-3,5-Dimethyl-2H-1,3,5-Thiadiazine-2-Thione	533-74-4	~24%

FDA: This product is FDA approved under 21 CFR Section(s); 176.300 (Slimicides Subpart B – Substances for use as components of paper and paperboard) Consult your sales representative for any use limitations.

EPA FIFRA Registration Number 67869-20

16. OTHER INFORMATION

NFPA HAZARD RATING (NATIONAL FIRE PROTECTION ASSOCIATION)

FIRE:	1
HEALTH:	3
REACTIVITY:	1

HMIS (HAZARDOUS MATERIAL IDENTIFICATION SYSTEM)

FIRE:	1
HEALTH:	3
REACTIVITY:	1
PROTECTIVE EQUIPMENT:	H

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