



**MATERIAL  
SAFETY DATA  
SHEET**

## N-1386 HAN

DATE: 08/18/2006

CAS NO: 3064-70-8

SUPERSEDES: 6/2000

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **N-1386 HAN**  
SYNONYMS: Bis (trichloromethyl) sulfone  
Including; heavy aromatic naphtha  
MOLECULAR FORMULA:  $C_{13}CSO_2CC_{13}$

**VERICHEM, 3499 Grand Avenue, Pittsburgh, PA 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: 703-527-3887.

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

#### REGULATED COMPONENTS

COMPONENT	CAS NUMBER	PERCENT	WORKER EXPOSURE	REFERENCE
Bis (trichloromethyl) sulfone	3064-70-8	40		
Heavy aromatic naphtha	64742-94-5	~54	PEL 100 ppm TWA 100 ppm	
Naphthalene	91-20-3	~5	PEL 10 ppm TWA 10 ppm	

### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

**DANGER!** Material is corrosive to the eyes and the irritating to the skin.

**APPEARANCE AND ODOR:** Slightly yellow-colored solution with slight aromatic odor.

**EFFECTS OF OVEREXPOSURE:** No exposure limits have been established for this material. However, the following exposure limits apply for components of this material.

**Naphtha:** The Federal OSHA Permissible Exposure Limit (PEL) for naphtha is 100 ppm (400 mg/m<sup>3</sup>) as the Time Weighted Average (TWA) for 8-hour exposure (1). The supplier recommended 100 pp (563 mg/m<sup>3</sup>) as the Time Weighted Average (TWA) for 8-hour exposure.

**Naphthalene:** The American Conference of Governmental Industrial Hygienists (ACGIH) has adopted as the Threshold Limit Value (TLV) a Time Weighted Average (TWA) for 8-hour exposure of 10 ppm (52 mg/m<sup>3</sup>). The Short Time Exposure Limit (STEL) is 15 ppm (79 mg/m<sup>3</sup>). The Federal OSHA Permissible Exposure Limit (PEL) for naphthalene is 10 ppm (50 mg/m<sup>3</sup>). The Short Term Exposure Limit (STEL) is 15 ppm (75 mg/m<sup>3</sup>). PELs refer to airborne concentrations measured in the breathing zone by appropriate sampling techniques.

### 4. FIRST AID MEASURES (IN CASE OF CONTACT):

**IF IN EYES:** Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Get medical attention. Remove contact lenses, if present, after the first 5 minute, then continue rinsing eye. Call a poison control center or doctor for treatment advice. **IF ON SKIN:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. **IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person. **IF INHALED:** Move person to fresh air. If not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

## 5. **FIRE FIGHTING MEASURES**

### FLAMMABLE PROPERTIES

FIRE POINT: ..... 198<sup>0</sup> F/92<sup>0</sup>C (Cleveland Open Cup)

FLASH POINT: ..... 158<sup>0</sup>F/70<sup>0</sup>C (Seta Flash)

FLAMMABLE LIMITS (% BY VOLUME): ..... N/A

AUTOIGNITION TEMPERATURE: ..... N/A

DECOMPOSITION TEMPERATURE: ..... Greater than 75<sup>0</sup>F/135<sup>0</sup>C

### **EXTINGUISHING MEDIA AND FIRE FIGHTING INSTRUCTION**

#### FIRE HAZARDS

Under fire conditions, this material supports combustion and decomposes to give off toxic materials, such as hydrogen chloride, carbon monoxide, phosgene and sulfur dioxide. A thermal explosion may occur if containers of Slimicide/Fungicide in Heavy Aromatic Naphtha are exposed to flame or elevated temperatures.

Heavy aromatic naphtha is volatile and gives off invisible vapors. Either the liquid or vapor may settle in low areas or travel some distance along the ground or surface to remote ignition sources where they may ignite or explode.

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.

As in any fire, prevent human exposure to fire, smoke, fumes, or products of combustion. Evacuate nonessential personnel from the fire area. Fire fighters should wear full face, self -contained breathing apparatus and impervious protective clothing.

Use standard fire-fighting techniques to extinguish fires involving this material. Use water spray, Dry chemicals, foam or carbon dioxide.

If drums are NOT leaking, keep fire-exposed containers cool with a water spray to prevent rupture due to excessive heat. High-pressure water hoses may spread product from broken containers, increasing contamination or fire hazards.

Contaminated buildings, areas and equipment must not be used until they are properly decontaminated.

If fire cannot be controlled and containers are heated, **EVACUATE THE AREA!**

## 6. **ACCIDENTAL RELEASE MEASURES**

### **STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

#### SPILL HANDLING:

Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices.

Any person entering either an area of a significant spill or of unknown concentration of a vapor or aerosol should use a NIOSH-approved, positive-pressure self-contained breathing apparatus or a positive-pressure, air-supplied respirator with escape pack.

Small spills can be handled routinely. Use adequate ventilation and/or wear a NIOSH approved, organic vapor respirator with dust, mist and fume filters to prevent inhalation exposure.

Wear protective clothing to prevent skin and eye contact. Use the following procedures:

Soak up pooled liquid with a suitable absorbent such as clay, sawdust, kitty litter or fuller's earth. Sweep up the absorbed material, being careful not to create dust, and place into an appropriate chemical waste container for disposal.

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. Do not contaminate water sources by disposal of wastes.

Large spills must be handled according to a predetermined plan. Naphthalene, which occurs in the product (~6%), is covered by EPA Regulation 40 CFR 372 ( SARA Section 31), Toxic Chemical Release Reporting.

7. **HANDLING AND STORAGE**

**INDUSTRIAL HYGIENE:** 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 customers' applications, specific safe handling procedures should be developed by a person knowledgeable of the intended use conditions and equipment.

**VENTILATION: Engineering Controls:** In those cases where engineering controls are indicated by the use conditions, the following traditional exposure control techniques may be used to effectively minimize employee exposure: local exhaust ventilation, enclosed system design, process isolation and remote control wet processing methods, or continuous monitoring devices in combination with appropriate use of personal protective equipment.

**STORAGE REQUIREMENTS:** This material should be stored in containers, which meet the bonding and grounding guidelines specified in NFPA77-1983, Recommended practice on static electricity. Store away from ignition sources such as heat, sparks, pilot lights, static electricity and open flames. Store away from incompatible substances, elastomers. Store in accordance with 20 CFR 1910.106.

Containers should be stored at room temperature in a 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. Avoid prolonged storage at temperatures above 158° F (70° C). Container should not be opened until ready for use. It is recommended that the product not be used after 12 months from the date of manufacture.

8. **PERSONAL PROTECTION**

**EYE PROTECTION REQUIREMENTS:** ..... Chemical splash goggles and face shields.

**SKIN PROTECTION REQUIREMENTS:** ..... Chemical resistant gloves and protective clothing.

**VENTILATION REQUIREMENTS:** ..... Use local exhaust ventilation where dust or vapor may be generated.

**RESPIRATOR REQUIREMENTS:** ..... For irritating vapors, use a NIOSH approved respirator in accordance with OSHA regulations.

9. **PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE AND ODOR:** Slightly yellow color solution with slight aromatic odor.

**BOILING POINT:** ..... Decomposes before boiling point.

**MELTING POINT:** ..... N/A

**VAPOR PRESSURE:** ..... 6.2 mm Hg at 68°F/20°C

**SPECIFIC GRAVITY:** ..... 1.13 at 60°F/60°F (15.6°C/15.6°C)

**VAPOR DENSITY:** ..... N/A

**PERCENT VOLATILE (BY WEIGHT):**..... 60%

**pH:**..... N/A

**SATURATION IN AIR (PERCENT BY VOLUME):** N/A

**EVAPORATION RATE:**..... N/A

**SOLUBILITY IN WATER:**..... N/A

10. **STABILITY AND REACTIVITY**

**CHEMICAL REACTIVITY:** This product is relatively non-reactive. The active ingredient will hydrolyze under aqueous conditions to form inorganic chloride and sulfate. The reaction is accelerated under alkaline conditions at elevated temperatures.

**STABILITY (CONDITIONS TO AVOID):** This material is relatively stable at room temperature. However, the following information regarding thermal stability for the technical material, present in this formulation by 40.0%, is available.

The technical grade is relatively stable at room temperature. Exothermic decomposition has been detected at 212°F (100°C) and above. At 212 °F (100 °C) the half-life is 14 days. The primary decomposition products are hexachloroethane, sulfur dioxide, chlorine and perchloroethylene.

If the heat generated from the decomposition reaction cannot be properly released, the material will self-heat and eventually reach thermal runaway at temperatures above 302°F (150°C). IF the material is confined, a thermal explosion may occur due to the large quantities of heat and gas generated simultaneously.

**INCOMPATIBLE MATERIALS:** This product is corrosive to steel (SAE 1020) and to aluminum; of the metals, austenitic stainless steels are recommended for handling. The naphtha will attack rubber and elastomers. Polypropylene, Polyethylene, polyesters such as ATLAS\*382 and HETRON\*\*197, epoxies and phenolic or epoxy linings are resistant.

\* A registered trademark of ICI United States, Inc.

\*\* A registered trademark of Hooker Chemical Corporation

## 11. **TOXICOLOGICAL INFORMATION**

### **ACUTE EFFECTS**

**EYE:** Corrosive to rabbit eyes. Slight to moderate corneal opacity and Moderate to marked redness and chemosis of the conjunctivae were observed. No remission was in evidence seven days following treatment.

**SKIN CONTACT:** Corrosive to rabbit skin following a 4 or 24 hour exposure.

**INGESTION:** The acute oral LD50 is 1737 mg/kg in female rats. The acute oral LD50 is 1859 mg/kg in male rats. A single oral dose of 500 mg/kg produced a mild decrease in physical activity, piloerection, anoenital strains and no mortality in male or female rats. Toxic symptoms at higher does included diarrhea, red facial stains and stained fur.

**INHALATION:** The acute inhalation LC50 is less than 1.91 mg/l in both male and female rats. A single 1-hour inhalation exposure of 1.91 mg/l (greater than 86% respirable) produced salivation, labored breathing and 100% mortality within 24 hours in male and female rats. Pulmonary insufficiency was evidenced by pulmonary congestion. T-4254, T-10591, T-12920

### **HUMAN HEALTH:**

Principle routes of exposure are skin contact and inhalation. Inhalation of mists or vapors are irritating to the respiratory tract and may cause breathing difficulty and pulmonary edema. Symptoms may be delayed several hours or longer depending upon exposure and may cause headache and symptoms of central nervous system depression, such as lack of concentration anesthesia and drowsiness.

Contact with the eyes and skin may result in severe irritation, redness, blurred vision, excessive tearing and possibly eye and skin burns.

There are no data available which address the effects of long term exposure.

This product contains ~6% naphthalene which is present in the heavy aromatic naphtha (10%). Naphthalene is a hemolytic agent. Persons with glucose-6-phosphate dehydrogenase deficiency may be more susceptible. Naphthalene is a dermal sensitizer. It may cross the placental barrier. Prolonged and/or repeated exposure to naphthalene vapors may cause malaise, headache and vomiting. Cataracts and corneal ulcerations have been induced in animals and occasionally reported in humans. Reproductive effects have been reported in animals.

Pre-existing lung disease is aggravated by exposure to this product.

## 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.

## 13. **DISPOSAL CONSIDERATION**

**ACTION TO TAKE IN THE EVENT OF A SPILL:** Contain spill.

**DISPOSAL METHOD:** "Empty" containers contain residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity or other sources of ignition. **THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.** "Empty" drums should be completely drained, closures sealed and properly returned to a drum reconditioner. **ENVIRONMENTAL DATA:** Empty containers and material that cannot be used or chemically reprocessed should be disposed of at an approved facility in accordance with any applicable regulations under the Resource Conservation and Recovery Act. **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	Corrosive Liquid, N.O.S., (Contains Bis (Trichloromethyl) Sulfone)	Corrosive Liquid, N.O.S., (Contains Bis (Trichloromethyl) Sulfone)	Corrosive Liquid, N.O.S., (Contains Bis (Trichloromethyl) Sulfone)	Corrosive Liquid, N.O.S., (Contains Bis (Trichloromethyl) Sulfone)
Hazard Class	8	8	8	8
Packing Group	III	III	III	III
Subsidiary Class				
UN/ID Number	1760	1760	1760	1760
Transport Label Required	Corrosive	Corrosive	Corrosive	Corrosive
Packing Instructions Passenger Cargo	N/A	N/A	N/A	N/A
Max. Net Quantity Passenger Cargo	N/A	N/A	N/A	N/A
D.O.T. Hazardous Substances	N/A	N/A	N/A	N/A
IMDG Page	N/A	N/A	N/A	N/A

**15. REGULATORY INFORMATION****INVENTORY INFORMATION**

US TSCA:

CANADA DSL:

EEC EINECS:

**OTHER ENVIRONMENTAL INFORMATION**

COMPONENT:

CAS. NUMBER: 3064-70-8

PERCENT: 40

TPQ (Pounds):

RQ (Pounds):

RCRA: RSCA 12B:

**PRODUCT CLASSIFICATION UNDER TILE III SECTION 313 OF SARA**

ACUTE: (Y); CHRONIC: (Y); FIRE : (N); REACTIVE: (N); PRESSURE: (N)

**16. OTHER INFORMATION****NFPA HAZARD RATING (NATIONAL FIRE PROTECTION ASSOCIATION)**

FIRE: 2 HEALTH: 3 REACTIVITY: 0

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