



**MATERIAL
SAFETY DATA
SHEET**

VeriGuard 19S

DATE: 08/21/2006

CAS # 2634-3-5

SUPERSEDES: 07/21/2005

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: VeriGuard 19S
MOLECULAR FORMULA: C₇H₅NOS
MOLECULAR WEIGHT: 151.8

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
1,2-Benzisothiazolin-3-one	002634-33-5	19.0	Unknown	
Sodium hydroxide	000310-73-2	5.0	2 mg/m ³ (8hr) TWA 2 mg/m ³ (8hr) TWA	OSHA PEL ACGIH STEL

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

APPEARANCE AND ODOR: Clear amber color odorless liquid.

EFFECTS OF OVEREXPOSURE: Respiratory irritant. Eye corrosive. Corrosive to the gastrointestinal tract. Skin corrosive. Skin sensitizer. 1,2-Benzisothiazolin-3-one: BIT, the biocidal active ingredient in this product, has the potential to induce human skin sensitization. However, based collectively on several patch test studies and our experience, formulations containing no more than 500 ppm BIT are unlikely to induce skin sensitization.

PHYSICAL/CHEMICAL HAZARDS: Eye: This product is eye corrosive based on its pH. This product is skin corrosive based on animal studies. The acute dermal toxicity of this product is greater than 1000 mg/kg. This product is not toxic by skin absorption. This product may induce skin sensitization in humans. Inhalation: Vapors and/or aerosols of this material will probably irritate mucous membranes, eyes, nose and respiratory passages. May be fatal if inhaled. Ingestion: This material will cause chemical burns of the mouth, pharynx, esophagus and stomach in humans if swallowed. Injury may be severe and cause death. The acute oral toxicity of this material is between 500 and 5000 mg/kg. Relative to other materials, this material is classified as slightly toxic by ingestion. Other: 1,2-Benzisothiazolin-3-one: The biocide component can induce skin sensitization.

4. FIRST AID MEASURES (IN CASE OF CONTACT)

IF IN EYES: Immediately flush the eyes with large quantities of running water for a minimum of 15 minutes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eye and lids with water. Do not attempt to neutralize with chemical agents. Obtain medical attention as soon as possible. Oils or ointments should not be used at this time. Continue the flushing for an additional 15 minutes if a physician is not immediately available.

IF ON SKIN OR CLOTHING: Remove contaminated clothing and footwear while under a safety shower. Wash off skin with plenty of soap and water. Get medical attention. Wash contaminated clothing and decontaminate footwear before reuse. **IF SWALLOWED:** DO NOT INDUCE VOMITING. Give one or two glasses of water to drink and refer to medical personnel or take direction from either a physician or a poison control center. Never give anything by mouth to an unconscious person. **Poison Control Center: Call 1-800-222-1222** **IF INHALED:** Remove victim to fresh air. If a cough or other respiratory symptoms develop consult medical personnel. **Note to Physician: Mucosal injury following ingestion of this potentially corrosive material contraindicates the induction of vomiting. 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

FLASH POINT: >280° F (137° C)

FLAMMABLE LIMITS (% BY VOLUME): No data

AUTOIGNITION TEMPERATURE: No data

PRODUCTS OF COMBUSTION: Carbon oxides, nitrogen oxides, sulphur oxides

EXTINGUISHING MEDIA AND FIRE FIGHTING INSTRUCTION

Water fog, foam, carbon dioxide, dry chemical, halogenated agents.

Wear self-contained breathing apparatus with full facepiece and full protective clothing. If contact occurs with material or its solutions, immediately flush with water and remove contaminated clothing.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Wear skin, eye and respiratory protection during cleanup. Contain spill. Soak up material with absorbent and shovel into a chemical waste container. Keep out of sewers and drains. 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 Pollution 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. Do not contaminate water by cleaning of equipment or disposal of waste.

7. HANDLING AND STORAGE

STORAGE REQUIREMENTS: Do not store near feed, food or within the reach of children. Keep container tightly sealed. Store in a cool, well ventilated area away from heat, sources of ignition, direct sunlight and strong oxidizing agents, acids. Due to potential corrosion in contact with mild steel, aluminum, copper and other metals, which may discolor product, avoid contact with these materials. Recommended storage containers are high density high molecular weight polyethylene or stainless steel. **HANDLING REQUIREMENTS:** Use closed handling and dispensing systems whenever possible. When open handling and dispensing procedures must be used, precautions should be in place to ensure no skin contact will occur. Do not create aerosols. Avoid breathing vapors or aerosols. Prevent skin and eye contact. Observe recommended exposure limits. A sensitized individual should not be exposed to the product, which caused the sensitization.

8. PERSONAL PROTECTION

No ACGIH TLV or OSHA PEL is assigned to this mixture. Control of exposure to below the PEL for the ingredients may not be sufficient. Minimize exposure in accordance with good hygiene products. **Sodium hydroxide:** The ACGIH STEL for sodium hydroxide is 2 mg/m³, 8-hour TWA, ceiling. The OSHA PEL for sodium hydroxide is 2 mg/m³, 8-hour TWA. **EYE PROTECTION REQUIREMENTS:** Take all precautions to prevent skin contact. Use gloves, arm covers and apron determined to be impervious under the conditions of use. Additional protection, such as full body suit and boots, may be required depending on conditions. Eyewash station and safety shower in work area. **SKIN PROTECTION REQUIREMENTS:** Remove contaminated clothing and wash before re-wearing. Wash separately from other laundry. Chemical tight goggles and full-face shield. **VENTILATION REQUIREMENTS:** Use permitted ventilation adequate to maintain safe levels. **RESPIRATOR REQUIREMENTS:** If needed, use NIOSH certified full facepiece respirator for mists.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR:	Clear amber liquid
BOILING POINT:	~100° C
MELTING POINT:	N/A
VAPOR PRESSURE:	Unknown
SPECIFIC GRAVITY 25° C:	1.12
VAPOR DENSITY:	Unknown
PERCENT VOLATILE (BY WEIGHT):	15%
pH:	10.1 @ 25° C
SATURATION IN AIR (PERCENT BY VOLUME):	Unknown
EVAPORATION RATE:	Unknown
SOLUBILITY IN WATER:	Yes
VISCOSITY:	124 mm ² /s @ 20° C

10. STABILITY AND REACTIVITY

STABILITY / THERMAL (CONDITIONS TO AVOID): Stable under all normal storage conditions.

CONDITIONS TO AVOID: Protect from long-term storage below -5°C

INCOMPATIBILITY: Strong oxidizing agents, reducing agents. Will show some corrosion to mild steel, aluminum, copper and other metals causing possible discoloration of product.

HAZARDOUS POLYMERIZATION: Not known to occur.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon oxides, nitrogen oxides, sulfur oxides.

11. TOXICOLOGICAL INFORMATION

ACUTE EFFECTS

ORAL TOXICITY: 500 to 5000 mg/kg

DERMAL TOXICITY: >1000 mg/kg

Regulated carcinogen(s): This product contains no components present at concentrations equal to or greater than 0.1% listed by IARC, OSHA, NTP or ACGIH as a carcinogen.

12. ECOLOGICAL INFORMATION

FISH AND WILDLIFE: Toxic to fish and very toxic to algae ($\text{EC}_{50}/96 = 0.055 \text{ mg/l}$)

AQUATIC TOXICITY: Rainbow trout (96-hour LC_{50}): 1.3 mg/l.

ENVIRONMENTAL FATE: BIT is not likely to bioaccumulate; there is evidence of photodegradation in water and soil.

OTHER: BIT is broken down in sewage treatment at concentrations <5 ppm.

13. DISPOSAL CONSIDERATION

PESTICIDE DISPOSAL: VeriGuard 19S is toxic to fish and spills must be detoxified by biological or chemical means. Aerobic sewage treatment organisms will metabolize the active ingredient in concentrations of less than 5 ppm (25 ppm VeriGuard 19S). The half-life in an aerobic sewage treatment plant is about 50 minutes. The metabolites are not toxic to fish. Spills of more than 100 kg should be detoxified by the following chemical procedure: **1.** Neutralize spill by adding 3 gallons of 10% (wt./wt.) sodium bisulfite solution per pound of spilled material. The 10% solution of sodium bisulfite can be prepared by mixing 1 part of sodium metabisulfite with 9 parts of cold water and stirring for 15 minutes until dissolution is complete. The pH of the sodium bisulfite solution should be adjusted to 6.5 by adding dilute sodium hydroxide solution. Refer to the manufacturer's MSDS for information on the hazards and proper use of sodium metabisulfite and sodium hydroxide. **2.** Test for completion of the reaction by using 10013 Merckoquant Sulfite Test Strips. The reaction is complete when excess bisulfite can be detected. If bisulfite cannot be detected, add 20% of the original volume of the deactivating solution used, wait 20 minutes and repeat the test. Detoxified waste is not a hazardous waste under RCRA.

CONTAINER DISPOSAL: Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from container using appropriate solvents (e.g. triple rinsing). Then offer for recycling/reconditioning or puncture or otherwise destroy empty container before disposal.

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: Sodium Hydroxide & 1, Benzisothiazolin-3-one)			
Hazard Class	8.0			
Packing Group	II			
Subsidiary Class				
UN/ID Number	1760			
Transport Label Required	Corrosive			
Packing Instructions Passenger Cargo	808 812			
Max. Net Quantity Passenger Cargo	1L 30L			
DOT Hazardous Substances	Yes			
IMDG Page				

15. REGULATORY INFORMATION

INVENTORY INFORMATION

US TSCA: All ingredients are on the TSCA Chemical Substances Inventory.

CANADA DSL: All ingredients are on the DSL (Domestic Substances List).

WHMIS: Class E – Corrosive materials (CPR62)

16. OTHER INFORMATION

NFPA HAZARD RATING (NATIONAL FIRE PROTECTION ASSOCIATION)

FIRE: 1

HEALTH: 3

REACTIVITY: 0

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