



**MATERIAL SAFETY
DATA SHEET**

N-2000 ANTIMICROBIAL

DATE: 08/04/2006

CAS NO: 13590-97-1

SUPERSEDES: 10-01-01

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: N-2000 ANTIMICROBIAL
SYNONYMS: Dodecylguanidine HCl
CHEMICAL FAMILY: Amine Solution
MOLECULAR FORMULA: C₁₃H₂₀N₃Cl
MOLECULAR WEIGHT: 253.5

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
N-dodecylguanidine HCl	13590-97-1	35%	None Established	OSHA/ ACGHI

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE AND ODOR: Clear Yellow Liquid

EFFECTS OF OVEREXPOSURE:

HUMAN: Causes irreversible eye damage and skin irritation. Do not get in eyes or on clothing.

ENVIRONMENTAL: Toxic to fish.

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

FLASH POINT:Not Flammable

FLAMMABLE LIMITS (% BY VOLUME):.....Not Available

AUTOIGNITION TEMPERATURE:.....Not Available

DECOMPOSITION TEMPERATURE:Not Available

EXTINGUISHING MEDIA AND FIRE FIGHTING INSTRUCTION

In case of fire use water spray, alcohol foam, carbon dioxide, or dry chemicals. Exercise caution when fighting fires involving chemical substances. Respiratory protection is required. Burning will produce toxic fumes. Containers exposed to heat will result in pressure increase in containers. Cool hot containers with cool water.

6. **ACCIDENTAL RELEASE MEASURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

- Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices.
- See Section 8 for PPE recommendation.
- Dyke area to contain spill.
- Soak up pooled liquid with a suitable absorbent such as clay, sawdust kitty litter or fuller's earth. Sweep up the absorbed material and place into an appropriate chemical waste container for disposal. Generously cover contaminated area with 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 discharge unless in accordance with Federal, State and Local Regulations.
- Wearing PPE. (Section 8) Immediately dike material to keep away from water sources. Absorb with vermiculite or other suitable absorbent. Discard in accordance with Federal, State, and local regulations. Residual amounts left on surface maybe cleaned with soap and water. Rinse residuals to municipal treatment plant.

7. **HANDLING AND STORAGE**

Storage Requirements: Keep container closed when not in use. Do not use or store near heat or open flame.

Handling Requirements: Do not get in eyes, on skin or clothing. Wear goggles, face shield, or safety glasses and chemical resistant gloves when handling. Wash thoroughly with soap and water after handling and before eating toileting or smoking.

8. **PERSONAL PROTECTION**

EYE PROTECTION REQUIREMENTS: Chemical splash goggles and face shields.

SKIN PROTECTION REQUIREMENTS: Chemical resistant gloves and protective clothing. Remove and wash clothing before reuse. Launder clothing separately from household articles. Replace gloves frequently. Any clothing which has been drenched or heavily contaminated and use gloves must be disposed of in accordance with state and local regulations.

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: Clear yellow liquid light blue with glycol odor.

BOILING POINT: 226°F / 108°C

EVAPORATION RATE: Not applicable.

MELTING POINT: Not applicable.

PERCENT VOLATILE (BY WEIGHT): 65%

pH: ~4.0 @ 25°C

SATURATION IN AIR (PERCENT BY VOLUME): Not available.

SOLUBILITY IN WATER: Complete.

SPECIFIC GRAVITY: 1.02 – 1.06 @ 25°C

VAPOR DENSITY: Not available

VAPOR PRESSURE: Not available

10. STABILITY AND REACTIVITY

STABILITY (CONDITIONS TO AVOID): Stable.
POLYMERIZATION (CONDITIONS TO AVOID): Heat
INCOMPATIBLE MATERIALS: Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors. Contact with strong alkalis (e.g. ammonia and its solution, carbonates, sodium hydroxide (caustic), potassium hydroxide, calcium hydroxide (lime), cyanide, sulfide, hypochlorites, chlorites) may generate heat, splattering or boiling and toxic vapors.
HAZARDOUS DECOMPOSITION PRODUCTS: CO₂, HCL, NH₃, NO, and Amines

11. TOXICOLOGICAL INFORMATION

ACUTE EFFECTS

ORAL TOXICITY:LD₅₀ Rats – 1400 mg/kg
DERMAL TOXICITY:LD₅₀ Rabbits – >2000 mg/kg
INHALATION TOXICITY:LD₅₀ Rats, Female 4 hrs – 0.20 mg/l
EYE IRRITATION:Rabbits - Corrosive
SENSITIZATION:Guinea Pig – Not a sensitizer
SKIN IRRITATION:Rabbits - Corrosive

CRONIC/SUBCRONIC

Subchronic:

- 21 day Dermal Rats – Rats were dosed at 12.5, 25 and 50 mg/kg. The NOEL was 50 mg/kg.
- 90 Day Oral Dogs - Dogs were dosed at 5, 25 and 100 mg/kg. The NOEL was 25 mg/kg.

Teratogenicity Study: Rats were fed 45, 90 and 1870 mg/kg/day by gastric inhalation during days 6-15 of the gestation period. Based on the results the study was not fetotoxic, embryotoxic, or teratogenic at any dose level.

CARCINOGENICITY:

NTP: Not a carcinogen
IARC: Not a carcinogen
OSHA: Not a carcinogen

12. ECOLOGICAL INFORMATION

BLUEGILL:96 hours LC₅₀ – 2.0 mg/l
RAINBOW TROUT:96 hours LC₅₀ – 2.0 mg/l
DAPHNIA MAGNA:48 hours LC₅₀ – 0.088 mg/l
MALLARD DUCK:8 day feeding LC₅₀ – 15,000 ppm
BOBWHITE QUAIL:8 day feeding LC₅₀ – 15,000 ppm

13. DISPOSAL CONSIDERATION

PROHIBITIONS: Do not contaminate water, food or feed by storage or disposal.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or rinsate is a violation of Federal Law. If waste cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance. **CONTAINER DISPOSAL:** Do not reuse empty container. Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by the state and local authorities.

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, Acidic, Organic, N.O.S. (contains: dodecylguanidine HCl)		Corrosive Liquid, Acidic, Organic, N.O.S. (contains: dodecylguanidine HCl)	
Hazard Class	8		8	
Packing Group	III		III	
Subsidiary Class				
UN/ID Number	3265		3265	
Transport Label Required	Yes		Yes	
Packing Instructions Passenger Cargo	818 820		818 820	
Max. Net Quantity Passenger Cargo	5L 60 L		5L 60 L	
D.O.T. Hazardous Substances	Corrosive		Corrosive	
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15. REGULATORY INFORMATION**INVENTORY INFORMATION**

US TSCA: The chemical substances in this product are on the TSCA 8(b) inventory (40 CFR 710)

CANADA DSL: N/A

EEC EINECS: N/A

OTHER ENVIRONMENTAL INFORMATION

The following components are defined as toxic chemicals subject to reporting requirements of Section 313 of Title III and of 40 CFE 372 or subject to other EPA regulations.

PRODUCT CLASSIFICATION UNDER TITLE III SECTION 313 OF SARA

ACUTE: (Y)

CHRONIC: (N)

FIRE: (N)

REACTIVE: (N)

PRESSURE: (N)

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

FIRE: 0

HEALTH: 2

REACTIVITY: 0

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