



**MATERIAL  
SAFETY  
DATA  
SHEET**

## Antimicrobial N-20

DATE: 08/17/2006

CAS NO: 010222-01-2

SUPERSEDES: 8/1/01

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **Antimicrobial N-20**  
SYNONYMS: DBNPA  
CHEMICAL FAMILY: 2,2-Dibromo-3-nitrilopropionamide  
MOLECULAR FORMULA: 242  
MOLECULAR WEIGHT:  $C_3H_2 Br_2N_2O$

**VERICHEM INC, 3499 Grand Avenue, Pittsburgh, PA, USA, 15225 (412-331-7299)**

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
2,2-Dibromo-3-nitrilopropionamide	010222-01-2	20%		

### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

APPEARANCE AND ODOR: Clear, light yellow to amber liquid. Disinfectant odor.

EFFECTS OF OVEREXPOSURE: Avoid temperatures above 158o F (70° C).

#### HUMAN

EYE: May cause pain. May cause severe irritation with corneal injury, which may result in permanent impairment of vision, even blindness. SKIN: Prolonged exposure may cause some irritation, even a burn. May cause more severe response if skin is abraded (scratched or cut). A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.

#### ENVIRONMENTAL

This pesticide is toxic to fish and aquatic organisms.

### 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: Cleveland open cup No flash point to 175°F Setaflash close cup no flash point to 166°F

FLAMMABLE LIMITS (% by volume): Not Determined

AUTOIGNITION TEMPERATURE: Not Determined

DECOMPOSITION TEMPERATURE: Not Determined

**EXTINGUISHING MEDIA AND FIRE FIGHTING INSTRUCTION**

HAZARDOUS COMBUSTION PRODUCTS: Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

EXTINGUISHING MEDIA: This material does not burn. If exposed to fire from another source, use suitable extinguishing agent for that fire. FIRE FIGHTING INSTRUCTIONS: This material does not burn. Fight fire for other material that is burning. PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: Wear positive pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves. 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**

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

Any person entering an area of a significant spill or of an unknown concentration of an aerosol should use a NIOSH approved, positive pressure self contained breathing apparatus or a NIOSH approved positive pressure air supplied respirator with escape pack. Small spills can be handle routinely. Use adequate ventilation and or wear a NIOSH approved organic vapor respirator with dust mist and fume filter 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 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. Large spills must be handled according to a predetermined plan.

7. **HANDLING AND STORAGE**

STORAGE REQUIREMENTS: Store below 95° F (35° C). Storage must only be in original container; keep container tightly closed when not in use.

HANDLING: Avoid contact with vapors from headspace of containers. Avoid contact with mists from headspace of containers. Refer to "Personal Protection". Section 8 of this MSDS.

8. **PERSONAL PROTECTION**

EYE PROTECTION REQUIREMENTS: Use chemical goggles. Eye wash fountain should be located in immediate work area.

SKIN PROTECTION REQUIREMENTS: When prolonged or frequently repeated contact could occur, use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron or full-body suit will depend on operation. If hands are cut or scratched, use gloves impervious to this material even for brief exposure.

VENTILATION REQUIREMENTS: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

RESPIRATOR REQUIREMENTS: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required, use an approved air purifying or positive pressure supplied-air respirator depending on the potential airborne concentration. In misty atmospheres, use an approved mist respirator.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE AND ODOR: .....Clear, light yellow to amber liquid  
ODOR: .....Light, disinfectant odor  
BOILING POINT:.....Decomposes >70°C(158° F)  
MELTING POINT: .....N/A  
VAPOR PRESSURE: .....4 x10(-5) mmHg  
VAPOR DENSITY: .....<1 (water)  
SPECIFIC GRAVITY: .....1.20 – 1.30 @ 23° C  
PERCENT VOLATILE (BY WEIGHT):.....N/A  
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 STABILITY: Stable under recommended storage conditions  
STABILITY (CONDITIONS TO AVOID): Avoid temperatures above 158°F (70° C)  
Incompatibility with other materials: Avoid contact with strong bases.  
HAZARDOUS DECOMPOSITION PRODUCTS: Gases are released during decomposition.  
Hazardous decomposition products may include and are not limited to bromine (Br<sub>2</sub>), cyanogen bromide, debromoacetonitrile, carbon dioxide.  
HAZARDOUS POLYMERIZATION: Will not occur.

**11. TOXICOLOGICAL INFORMATION**

**ACUTE EFFECTS**

ORAL: The oral LD<sub>50</sub> for rats is 510 mg/kg  
DERMAL: The LD<sub>50</sub> fro skin absorption in rabbits is >2000 mg/kg  
INHALATION: The aerosol 4 hr. LC<sub>50</sub> for male rats is 1.40 mg/liter and female rats is 1.25 mg/liter for 4 hours  
MUTAGENICITY: (effects on Genetic Material): For the active ingredients DBNPA in vitro mutagenicity studies were negative. For the major component in vitro mutagenicity studies were negative. Animal mutagenicity studies were negative.

**12. ECOLOGICAL INFORMATION**

**FISH AND WILDLIFE**

AQUATIC: This pesticide is toxic to fish and aquatic organisms. 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 Pollutant 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. Apply this pesticide only as specified on this label.  
Movement and Partitioning: Based largely or completely on information on component information. Bioconcentration potential is low (BCF less than 100 or Log Pow less than 3).  
Degradation and Persistence: Based on the stringent test guidelines, this material cannot be considered as readily biodegradable however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.  
ECOTOXCITY: Based on information for DBNPA. Material is highly toxic to aquatic organisms on an acute basis. (LC<sub>50</sub> between 0.1 and 1.0 mg/l in most sensitive species). Based on information for tetraethylene glycol. Materia is practically non-toxic to fish on an acute basis. (LC<sub>50</sub> greater than 100 mg/l. Based on information fro this product. Growth inhibition EC<sub>50</sub> for marine diatom Skeletonema costatum is 0.53 mg/l. Acute LC<sub>50</sub> for marine copepod Acartia tonsa is 1.78 mg/l.

**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.

**PESTICIDE STORAGE:**

**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	Not Regulated	Not Regulated	Not Regulated	Not Regulated
Hazard Class	Not Regulated	Not Regulated	Not Regulated	Not Regulated
Packing Group	Not Regulated	Not Regulated	Not Regulated	Not Regulated
Subsidiary Class	Not Regulated	Not Regulated	Not Regulated	Not Regulated
UN/ID Number	Not Regulated	Not Regulated	Not Regulated	Not Regulated
Transport Label Required	Not Regulated	Not Regulated	Not Regulated	Not Regulated
Packing Instructions Passenger Cargo	Not Regulated	Not Regulated	Not Regulated	Not Regulated
Max. Net Quantity Passenger Cargo	Not Regulated	Not Regulated	Not Regulated	Not Regulated
D.O.T. Hazardous Substances	Not Regulated	Not Regulated	Not Regulated	Not Regulated
IMDG Page	Not Regulated	Not Regulated	Not Regulated	Not Regulated

**15. REGULATORY INFORMATION**

**INVENTORY INFORMATION**

US TSCA: YES

CANADA DSL: YES

EEC EINECS: YES

**16. OTHER INFORMATION**

**NFPA HAZARD RATING (NATIONAL FIRE PROTECTION ASSOCIATION)**

**FIRE: 1 HEALTH: 3 REACTIVITY: 1**

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