



**MATERIAL SAFETY
DATA SHEET**

Antimicrobial N-40

DATE: 08/18/2006

CAS NO: 010222-01-2

SUPERSEDES: 11/01/95

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **Antimicrobial N-40**
SYNONYMS: DBNPA
CHEMICAL FAMILY: 2,2-Dibromo-3-nitrilopropionamide
MOLECULAR FORMULA: $C_3H_2Br_2N_2O$
MOLECULAR WEIGHT: 242

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: 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	40%		

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE AND ODOR: Off white solid. Mild, disinfectant odor.

EFFECTS OF OVEREXPOSURE:

HUMAN: EYE, Broken or crushed product may cause severe irritation with corneal injury, which may result in permanent impairment of vision, even blindness. SKIN: Prolonged or repeated exposure may cause skin irritation, even a burn. May cause allergic skin reaction in susceptible individuals. A single prolonged exposure is not likely to result in the material being absorbed through the skin in harmful amounts. INGESTION: Single dose oral toxicity is considered to be moderate. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing amounts larger than that may cause serious injury, even death. INHALATION: Single exposure to dust is not likely to be hazardous. SYSTEMIC (other target organ) effects: excessive exposure may increase the blood and tissue levels of bromine. Observations in animals include kidney effects following repeated ingestion, but no evidence of systemic toxicity following repeated dermal exposure at maximum attainable doses (data on active ingredient). Ingestion of extremely large amounts of stearic acid may lower blood-clotting time.

ENVIRONMENTAL: This pesticide is toxic to fish and aquatic organisms.

4. **FIRST AID MEASURES (IN CASE OF CONTACT)**

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. **IF ON SKIN OR CLOTHING:** 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 for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. **IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice. Have the product container or label with you when calling a poison control center or doctor.

5. **FIRE FIGHTING MEASURES**

FLAMMABLE PROPERTIES

FLASH POINT:	Not Applicable
FLAMMABLE LIMITS (% BY VOLUME):	Not Applicable
AUTOIGNITION TEMPERATURE:	Not Determined
DECOMPOSITION TEMPERATURE:	Not Determined

EXTINGUISHING MEDIA AND FIRE FIGHTING INSTRUCTION

HAZARDOUS COMBUSTION PRODUCTS: Combustion may produce carbon dioxide, toxic carbon monoxide. Unidentified organic compounds may be formed during combustion.

EXTINGUISHING MEDIA: Water fog, carbon dioxide, dry chemical foam. For large scale fires, alcohol resistant foams or protein foams may function, but much less effectively. Water may be used to flush spills away from fire exposures. If possible, contain fire run-off water.

FIRE FIGHTING INSTRUCTIONS: Keep unnecessary people away; isolate hazard area and deny unnecessary entry. Highly toxic fumes may be released in fire situations. Firewater run-off may be toxic. When using water spray, boil-over may occur when the product temperature reaches the boiling point of water (tank type scenarios, not spills).

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: For optimum product quality, avoid contamination or dilution and store at temperature below 95° F (35° C). Keep container closed when not in use. All storage containers should be self-vented. Do not store in steel or stainless steel containers. Polyethylene is the preferred material.

HANDLING: Avoid contact with dusts from headspace of container

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. In dusty atmospheres, use an approved mist respirator.

9. **PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE AND ODOR:Clear, light yellow to amber liquid
ODOR:Mild, disinfectant odor
BOILING POINT:Not applicable
VAPOR PRESSURE:4 x10 (-5) mmHg @25°C
VAPOR DENSITY:<1 (water)
SPECIFIC GRAVITY:1.3 – 1.4 G/C C
SOLUBILITY IN WATER:Slowly soluble in more than 10 times its own volume

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 bromine (Br₂), cyanogen bromide, debromoacetonitrile, carbon dioxide.
HAZARDOUS POLYMERIZATION: Will not occur.

11. **TOXICOLOGICAL INFORMATION**

ACUTE EFFECT

ORAL: The oral LD₅₀ for rats is >1000 mg/kg
DERMAL: The LD₅₀ fro skin absorption in rabbits is >2000 mg/kg
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 on information for stearic acid. Bioconcentration potential is low (BCF less than 100 or Log Pow greater than 7). Bioconcentration potential is low (BCF less than 100 or Log Pow less than 3).

DEGRADATION AND PERSISTENCE: Based on information for DBNPA. Chemical degradation (Hydrolysis) is expected in the environment within minutes to hours. Degradation is expected in the soil environment with in minutes to hours. Based on information for stearic acid and methylcellulose. Biodegradation may occur under aerobic conditions (in the presence of oxygen).

ECOTOXCITY: Based on information for DBNPA. Material is highly toxic to aquatic organisms on an acute basis. (LC₅₀ between 0.1 and 1.0 mg/l in most sensitive species).

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	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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