

MATERIAL SAFETY DATA SHEET

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MOLD-CARE® MOLDICIDE CONCENTRATE

Health Emergencies: CHEMTREC® (800) 424-9300

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Packaged and Distributed: Nisus Corporation
100 Nisus Drive
Rockford, TN 37853
(800) 264-0870, Fax: (865) 577-5825

Product Trade Name: MOLD-CARE® MOLDICIDE CONCENTRATE
EPA Registration No.: 6836-212-64405
CAS No.: See Section 2
Molecular Formula: Mixture
Chemical Name: (Active) N, N-Didecyl-N, N-dimethyl ammonium chloride

SECTION 2 - INGREDIENTS INFORMATION

Chemical Name: N, N-Didecyl-N, N-dimethylammonium chloride
CAS No.: 7173-51-5
Approx. Wt%: 80%
Exposure Limit: None Established

Chemical Name: Ethyl alcohol
CAS No.: 64-17-5
Approx. Wt%: 10%
Exposure Limit: OSHA-PEL 1000 ppm ACGIH- TWA 1000 ppm

Chemical Name: Water
CAS No.: 7732-18-5
Approx. Wt%: 10%
Exposure Limit: None Established

SECTION 3 - HEALTH HAZARD INFORMATION

HMIS Classification:
Health Hazard: 3
Flammability: 2
Reactivity: 0

Primary Routes of Entry: Skin Contact, Eye Contact, Inhalation, Ingestion
Effects of Overexposure: Based on available animal toxicity information for this material, it is anticipated that direct skin or eye contact will produce severe irritation and/or chemical burns with possible irreversible damage. May be fatal if ingested. Ingestion can cause immediate burning pain in the mouth, throat and abdomen; severe swelling of the larynx. Ingestion can cause skeletal muscle paralysis affecting the ability to breathe; circulatory shock; and/or convulsions. Solvent vapors or mists of product may cause irritation of mucous membranes. Prolonged inhalation may produce drowsiness, lassitude and inability to concentrate.

Overexposure May Aggravate Existing Conditions: No effects indicated.

Material Listed as Carcinogen by:

National Toxicology Program: No
I.A.R.C. Monographs: No
O.S.H.A.: No

SECTION 4 - EMERGENCY AND FIRST AID MEASURES

Skin Contact: Wash with plenty of running water, and soap if available, for 15 minutes. Remove contaminated clothing and shoes. Get immediate medical attention. Wash clothing and decontaminate shoes before reuse.

Eye Contact: Immediately flush eyes with large amounts of running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eyes and lids with water. Get immediate medical attention. If physician is not available, flush for an additional 15 minutes and then transport victim to medical care.

Inhalation: Remove from area to fresh air. Get immediate medical attention. If not breathing, clear airway and start artificial respiration. If victim is having trouble breathing, give supplemental oxygen, if available.

Ingestion: Immediately give 3-4 glasses of milk (if unavailable, water). DO NOT induce vomiting. If vomiting does occur, give fluids again. Get immediate medical attention. Have physician determine if patient's condition allows for induction of vomiting or evacuation of the stomach. Do not give anything by mouth to an unconscious or convulsing person.

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, as well as oxygen and measures to support breathing manually or mechanically may be needed.

SECTION 5 - FIRE AND EXPLOSION DATA

Flash Point: 106°F (41°C) Setaflash
Decomposition Temperature: Not Known
Self Ignition: Not Known
Lower Explosion Limit: Not Known
Upper Explosion Limit: Not Known
Extinguishing Media To Be Used: Carbon dioxide, Dry chemical, Alcohol foam, Water
Special Fire Fighting Procedures: Must wear NIOSH/MSHA approved self-contained breathing apparatus and protective clothing. Cool fire-exposed containers with water spray.
Unusual Fire and Explosion Hazards: Products of combustion are toxic. Heated solvent vapors can travel to an ignition source and flash back.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Measures After Spillage / Leakage / Release: Danger- corrosive and combustible material. Remove all sources of ignition and ground all equipment before beginning cleanup. Floors may become slippery. Wear appropriate protective gear and NIOSH/MSHA approved respirator where mists or vapors of unknown concentrations may be generated (self-contained breathing apparatus preferred). Dike and contain spill with inert material (sand, earth, etc.). Transfer the solid and liquid separately to containers for recovery or disposal. Keep spill out of sewers and open bodies of water.

SECTION 7 - HANDLING AND STORAGE

Precautions for Storage and Handling: Maximum storage temperature: 140°F (60°C). Store containers in compliance with the most recent NFPA Code (NFPA 30). Ground all containers prior to pouring. Keep containers closed until used. Do not contaminate drinking water, food or feed by storage or disposal.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ventilation: In processes where mists or vapors may be generated, proper ventilation must be provided in accordance with good ventilation practices.

Respiratory Protection: In processes where mists or vapors may be generated, a NIOSH/MSHA jointly approved respirator is advised in the absence of proper environmental controls.

Protective Gloves: Use rubber or neoprene gloves to prevent skin contact.

Eye Protection: Wear chemical splash goggles where there is a potential for eye contact. Use safety glasses with side shields under normal use conditions.

Other Protective Equipment: Eye wash; safety shower; protective clothing (long sleeves, coveralls or other as appropriate), when needed, to prevent skin contact.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Form: Liquid
Color: Colorless to Pale Yellow
Odor: Ethanol-Like

Changes of Physical State

Freezing Point: 10 °C
Boiling Point: Not Known
Specific Gravity: 0.89 g/ml at 25°C
Bulk Density: Not Applicable
Vapor Pressure: Not Known
Vapor Density (Air=1): Not Known
Max. Percent Volatile: 20%
Evaporation Rate (Butyl Acetate=1): Not Known
Viscosity: Not Known
Water Solubility: Soluble
pH-Value: 6.5 - 9 (10% active solution)

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable; Conditions to Avoid: None known

Hazardous Decomposition Products:

Thermal decomposition may produce toxic vapors/fumes of hydrogen chloride, amines and other organic materials; and oxides of carbon and nitrogen.

Hazardous Polymerization: Will not occur. Conditions to Avoid: None Known

Incompatibility (materials to avoid): Strong oxidizing or reducing agents

SECTION 11 – TOXICOLOGY

No toxicity information is available for this product. The toxicity information provided is for a similar product(s) and/ or component(s) of this product.

Acute (80% active solution):

- Oral LD50: rat: 450 mg/kg
412 mg/kg (male); 292 mg/kg (female)
- Dermal LD50: rabbit: 3342 mg/kg
4300 mg/kg (two tests)
- Eye Irritation: rabbit: Severe irritation that did not clear by day 7 post dose.
- Skin Irritation: rabbit: Severe irritation that did not clear by day 7 post dose.

Acute (0.2% active solution): Skin Sensitization: guinea pig: Not a sensitizer

Acute (50% active solution): Skin corrosivity: rabbit: Corrosive

Chronic (50% active solution):

Not mutagenic. Not clastogenic with or without metabolic activation. No evidence of chromosomal damage in the bone marrow of rats treated with 600 mg/kg. No statistically significant teratogenic effects observed with administration of doses from 10 to 50 mg/kg during day 6 through 15 of gestation (rat and rabbit).

SECTION 12 – ECOLOGICAL INFORMATION

Toxicity to daphnia and other aquatic invertebrates: EC50
Species: Daphnia magna (water flea)
Exposure time: 48h

Additional ecological information: Information given is based on data on the components and the ecotoxicity of similar products.

The following ecotoxicological data refer to Didecylidimethylammonium chloride (CAS no. 7173-51-5):

Biodegradability:

Modified Strum Test

Concentration: 10 mg/l
Exposure time: 28 d
Result: Readily biodegradable
72%
Method: OECD Test Guideline 301B

Die-Away Test

Concentration: 0.016 mg/l
Exposure time: 24-70 d
91%
Method: OECD Test Guideline 303A

Remarks: The surfactant(s) contained in this mixture comply with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the component authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

Acute Fish Toxicity:

Acute toxicity LC50

Species: Pimephales promelas (fathead minnow)
Concentration: 0.19 mg/l
Exposure time: 96 h
Analytical monitoring: yes
Method: US-EPA

Chronic toxicity NOEC

Species Danio rerio (zebra fish)
Concentration: 0.03 mg/l
Analytical monitoring: yes
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates:

Immobilization EC50

Species: Daphnia magna (water flea)
Concentration: 0.06 mg/l
Exposure time: 48 h
Analytical monitoring: yes
Method: EPA-FIFRA

Reproduction Test NOEC

Species: Daphnia magna (water flea)
Concentration: 0.01 mg/l
Exposure time: 21 d
Analytical monitoring: yes
Method: OECD Test Guideline 211

Toxicity to algae:

Growth inhibition EC50
Species: Pseudokirchnerella subcapitata (green algae)
Dose: 0.02 mg/l
Exposure time: 96 h
Analytical monitoring: yes
Method: OECD Test Guideline 201

Toxicity to bacteria:

Respiration inhibition EC50
Species: activated sludge
Dose: 11.00 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

SECTION 13 – DISPOSAL CONSIDERATIONS

DISPOSAL

Dispose of in compliance with all Federal, state and local laws and regulations. Incineration is the preferred method.

Container Disposal: Triple rinse (or equivalent) then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

SECTION 14 – TRANSPORTATION INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

LAND TRANSPORTATION DOT SHIPPING NAME: Disinfectant, Liquid Corrosive, N.O.S., 8, PGIII UN1903. Small sizes/quantities may be Limited Quantity or ORM-D.

BULK SHIPPING: Contact manufacturer.

SECTION 15 – REGULATORY INFORMATION

EPA Registration No.: 6836-212-64405

OSHA Hazard: Corrosive, Flammable

WHMIS Classification: E Corrosive Material
B2 Flammable Liquid

CERCLA Reportable Quantity: 1000 lbs.

SARA 311/312 Hazards: Acute Health Hazard

EPCRA - EMERGENCY PLANNING COMMUNITY RIGHT-TO-KNOW

SARA 302 Components: No chemicals in the material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 213.

US State Regulations:

Massachusetts, Pennsylvania & New Jersey Right-to-Know Components:
Ethanol 64-17-5; Listed

California, Prop 65 Components: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

SECTION 16 – OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein. This information and product are furnished on the condition that the persons receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use thereof.

FOR ADDITIONAL REGULATORY INFORMATION AND TOXICOLOGY INFORMATION CONTACT NISUS CORPORATION.



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