

SAFETY DATA SHEET

I. IDENTIFICATION

GHS Product Identifier: DUROCIDE C100-G
 Synonyms: DBNPA
 General Description: Biocide
 SDS Identification Code: 210113
 Revision Date: 01/20/2014
 24 hour Emergency Response: ChemTel, Inc.
 1-800-255-3924 (US)
 1-813-248-0585 (Int'l)

DUROCIDE C100-G

HMIS Rating	
Health	3
Fire	0
Reactivity	0
Personal Protection	D

Rating Scale
4 = Extreme
3 = High
2 = Moderate
1 = Slight
0 = Insignificant

Recommended Use: A microbiocidal bactericide, fungicide, algicide and slimicide, in treating industrial cooling water systems and pulp & paper mills.

II. HAZARD IDENTIFICATION

Hazard Classification: Acute toxicity (oral, dermal) 4
 Eye Damage 1
 Skin Irritation 2
 Skin Sensitisation 1
 Aquatic acute 1

Signal Word: Danger

Hazard Statement(s): H302 Harmful if swallowed
 H315 Causes skin irritation
 H317 May cause an allergic skin reaction
 H318 Causes serious eye damage
 H400 Very toxic to aquatic life

Pictograms of related hazards:



Precautionary Statements: P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
 P304 + P340- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 - Immediately call a POISON CENTER or doctor/physician.

Description of other Hazards:

Eye: Corrosive.

Dermal: Irritant. May cause skin sensitization

Inhalation: Irritating to upper respiratory tract. In severe cases pulmonary edema may be developed

Ingestion: Irritating to mouth and gastrointestinal tract

III. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredient(s)</u>	<u>CAS Number</u>	<u>Approximate Wt.</u>
2,2-dibromo-3-nitrilopropionamide	10222-01-2	98

IV. FIRST-AID MEASURES

Eye contact	Holding the eyelids apart, flush eyes promptly with copious flowing water for at least 20 minutes. Get medical attention immediately.
Skin contact	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.
Inhalation	In case of dust inhalation or breathing fumes released from heated material, remove person to fresh air. Keep him quiet and warm. Apply artificial respiration if necessary and get medical attention immediately.
Ingestion	If swallowed, wash mouth thoroughly with plenty of water and give water to drink. Get medical attention immediately. Never give an unconscious person anything to drink.
Note to Physicians:	In case of ingestion, DO NOT induce vomiting. No specific antidote. Treat symptomatically and supportively.

V. FIRE-FIGHTING MEASURES

Extinguishing Media:	Material is not combustible. Use extinguishing media appropriate to surrounding fire conditions.
Fire and Explosion Hazards:	Not Available
Hazardous products of combustion:	When heated to decomposition, may release poisonous and corrosive fumes.
Fire Fighting Equipment:	Cool containers with water spray. Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) in positive pressure mode.

VI. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Wear self-contained breathing apparatus, full PVC clothing, PVC gloves and boots.
Environmental Precautions:	Prevent entry into sewers and watercourses
Methods for clean-up:	
Small Spill:	Sweep up, place in a bag and hold for waste disposal or possible re-use Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.
Large Spill:	Not Available

VII. HANDLING AND STORAGE

Handling:	Keep containers tightly closed. Avoid producing or diffusing dust into the air.
Incompatible products:	Not Available
Engineering Measures:	Not Available
Storage:	Store in a dry, cool, well-ventilated and shaded area, way from heat sources, away from incompatible materials (see "materials to avoid").

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION**Exposure Limits:** 2,2-Dibromo-3-nitrilopropionamide**OSHA Permissible Exposure Limits (PELs):** Not Available**American Conference of Governmental Industrial Hygienists (ACGIH):** Not Available**Threshold Limit Values (TLVs):** Not Available**Other Exposure Limits:** Not Available**Note:** The product was tested for "Particle size distribution". Results showed that it is noninhalable.**Engineering Controls:** Ventilation must be sufficient to maintain atmospheric concentration below recommended exposure limit.**Personal Protection:****Eye Protection:** Chemical safety goggles**Hand Protection:** Protective gloves**Skin Protection:** Body covering clothes and boots**Respiratory Protection:** Any air-purifying respirator with a high-efficiency particulate filter.**Personal Protection Index:****IX. PHYSICAL AND CHEMICAL PROPERTIES**

Property	Value	Test Used (if applicable)
Appearance:	White to off-white crystalline solid or powder of mild antiseptic odor	
Odor:	N/d	
Odor Threshold:	N/A	
pH(neat, 10%, or 1%):	N/d	
Specific Gravity:	2.375 (21°C)	
Relative Density:	N/A	
Melting/Freezing Point:	123 – 125 C	
Initial Boiling Point and boiling range:	Not applicable (decomposes)	
Flash Point:	N/A	
Solubility (water):	17±0.05 g/l at 25.7°C	
Solubility in other solvents	acetone - 35 g/100g ethanol - 25 g/100g dimethyl formamide - 120 g/100g polyethylene glycol (Mw 200) - 120 g/100g	
Intrinsic Viscosity:	N/A	
Flammability (solid, gas):	N/A	
Upper/Lower flammability limits:	N/A	
Vapor Pressure:	8.25x10(-4) mmHg (25°C)	
Vapor Density:	Not applicable under standard conditions	
Evaporation rate:	Not applicable under standard conditions	
Auto-ignition Temperature:	N/A	
Decomposition Temperature:	190°C	
Partition coefficient: n-octanol/water:	Equivalent Kow = 6.3	

Note: These physical properties are typical values for this product and not specifications.

X. STABILITY AND REACTIVITY**Reactivity Data:**

Decomposes when heated above decomposition temperature.

Chemical Stability:

Stability under normal conditions: Yes
Stabilizers needed: N/A

Other Information:

Conditions to avoid: Keep away from light and heat
 Heating above decomposition temperature
Materials to avoid: Oxidizing agents, reducing agents
Hazardous reactions: Hazardous polymerization will not occur
Hazardous decomposition products: Br₂, HBr, CNBr, NO_x, C₂H₅Br, CH₃Br

XI. TOXICOLOGICAL INFORMATION**Acute Toxicity:**

- Rat oral LD₅₀ 308 mg/kg
- Rabbit dermal LD₅₀ >2,000 mg/kg
- Rat inhalation LC₅₀ 0.32 mg/l/4 hour (powder)

Skin Corrosion/Irritation:

Moderate irritant

Serious Eye Damage/Irritation:

Corrosive

Respiratory or Skin Sensitization:

Produces 100% sensitization rate (Magnusson & Kligman maximisation study)

Germ Cell Mutagenicity:

Not mutagenic by the Ames Test

Genotoxicity

Did not induce DNA repair synthesis in the hepatocytes of male rats in vitro. Not clastogenic in chromosome aberration test with Human lymphocytes. Not clastogenic in chromosome aberration test with Chinese hamster cells

Carcinogenicity:

Not classified by IARC

Not included in NTP 11th Report on Carcinogens

Reproductive Toxicity:

In a 2-generation study in rats, the NOEL for reproduction parameters was ≥ 30 mg/kg/day.

Not teratogenic. The NOAEL (for fetal toxicity in rabbits) = 10 mg/kg/day.

Teratogenicity

No effects on specific target organs have been identified

STOT-single exposure:

Excessive repeated exposure may increase the blood and tissue

STOT-repeated exposure:

levels of bromine. NOEL 5 mg/kg/day (13 weeks oral, rat)

Aspiration Hazard:

Not expected to occur

XII. ECOLOGICAL INFORMATION**Toxicity:****Aquatic toxicity:****- 96 Hour-LC₅₀, Fish**

- 2.3 mg/l Rainbow trout (*Salmo gairdneri*)
- 3.4 mg/l Sheepshead minnow (*Pimephales promelas*)
- 2.3 mg/l Bluegill sunfish (*Lepomis macrochirus*)
- 0.72 mg/l Mysid shrimp (*Mysidopsis bahia*)
- 0.37 mg/l Eastern oyster (*Crassostrea virginica*)
- 0.86 mg/l

- 48 Hour-EC₅₀, Daphnia magna**Avian toxicity:**

- Oral LD₅₀, Bobwhite quail 354 mg/kg
- Dietary LC₅₀, Mallard duck > 5,620 ppm
- Dietary LC₅₀, Bobwhite quail > 5,620 ppm

Persistence and Degradability:

Not readily biodegradable according to EU criteria, however studies have shown that this substance will degrade under realistic conditions.

Bioaccumulative Potential:

Not expected to bioaccumulate

Mobility in Soil: Expected to be mobile in soil
Other Adverse Effects: Germany, water endangering classes (WGK) 3

XIII. DISPOSAL CONSIDERATIONS

Recommended Disposal Containers:	N/A
Recommended Disposal Methods:	Observe all federal, state and local environmental regulations when disposing of this material.
Physical and Chemical Properties that Affect Disposal:	N/A
Sewage Disposal:	N/A
Special Precautions for Landfills or Incineration:	N/A

XIV. TRANSPORT INFORMATION

The proper shipping name and/or hazard class for this product may vary according to packaging, properties and mode of transportation. Typical proper shipping names for this product are:



Transportation Mode:	DOT
DOT Status:	Not Regulated for Non-bulk. For Bulk - Regulated
UN/ID Number:	UN3077
Proper Shipping Name:	Environmentally hazardous substance, solid, n.o.s
Technical Name:	2,2-dibromo-3-nitrilopropionamide
Hazard Class (subclass):	9, Miscellaneous Hazardous Material
Packing Group:	III

Transportation Mode:	IATA/ICAO
IATA/ICAO Status:	Not Regulated for Non-bulk. For Bulk - Regulated
UN/ID Number:	UN3077
Proper Shipping Name:	Environmentally hazardous substance, solid, n.o.s
Technical Name:	2,2-dibromo-3-nitrilopropionamide
Hazard Class (subclass):	9, Miscellaneous Hazardous Material
Packing Group:	III

Transportation Mode:	IMDG
IMDG Status:	Not Regulated for Non-bulk. For Bulk - Regulated
UN/ID Number:	UN3077
Proper Shipping Name:	Environmentally hazardous substance, solid, n.o.s
Technical Name:	2,2-dibromo-3-nitrilopropionamide
Hazard Class (subclass):	9, Miscellaneous Hazardous Material
Packing Group:	III

Other Information:	
Harmonized Tariff Number:	Not Available
Flash Point:	Not Available
RQ lbs:	Not Available
RQ Component(s):	Not Available

XV. REGULATORY INFORMATION

The following regulations apply to this product:

Federal Regulations:

This product is subject to registration under FIFRA, EPA Reg. No. 88714-6.

TSCA: The ingredients of this product are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

OSHA's Hazard Communication Rule, 219 CFR 1910.1200: This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

SARA TITLE III: Section 302 Extremely Hazardous Substances – None (40 CFR 355)
Section 311/312 Hazardous Categories – Immediate, delayed (40CFR 370.2)
Section 313 Toxic Chemicals – On October 27, 1995, EPA published an administrative stay of the EPCRA section 313 reporting requirements for this chemical. Therefore, no Toxics Release Inventory reports are required for 2,2-dibromo-3-nitrilopropionamide until the stay is removed (40 CFR 372.65)

State Regulations:

California Proposition 65: This product does not contain any chemicals which require warning under California Proposition 65.

There are no known additional requirements necessary for compliance with State Right to Know Regulations.

International Regulations:

Australia	Listed in AICS
Canada	Listed in NDSL
China inventory	Listed
EU	Reported in EINECS
Korea	Listed in the Korea Existing Chemicals Inventory (KECI), number KE-09944
New Zealand Inventory	Listed in NZI
Philippines	Listed in PICCS
15.2 Chemical Safety Assessment	A Chemical Safety Assessment has not yet been carried out under the REACH Regulation.
EU DIRECTIVES	The active substance (DBNPA) is supported by ICL-IP Europe B.V. under the Biocidal Products Directive (98/8/EC). The 20% formulations have been registered and/ or notified in various Member States for industrial Product Types applications. For further information, please contact your ICL-IP sales representative.

XVI. OTHER INFORMATION

Revision Date: 03/20/2014
Revision Number: 1
Reason for revision: New

EPA REGISTRATION NUMBER: 88714-6-55400

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