

## SAFETY DATA SHEET

### I. IDENTIFICATION

GHS Product Identifier: **DUROCID 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)

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**

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

**IV. FIRST-AID MEASURES**

<b>Eye contact</b>	Holding the eyelids apart, flush eyes promptly with copious flowing water for at least 20 minutes. Get medical attention immediately.
<b>Skin contact</b>	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.
<b>Inhalation</b>	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.
<b>Ingestion</b>	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.
<b>Note to Physicians:</b>	In case of ingestion, DO NOT induce vomiting. No specific antidote. Treat symptomatically and supportively.

**V. FIRE-FIGHTING MEASURES**

<b>Extinguishing Media:</b>	Material is not combustible. Use extinguishing media appropriate to surrounding fire conditions.
<b>Fire and Explosion Hazards:</b>	Not Available
<b>Hazardous products of combustion:</b>	When heated to decomposition, may release poisonous and corrosive fumes.
<b>Fire Fighting Equipment:</b>	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**

<b>Personal Precautions:</b>	Wear self-contained breathing apparatus, full PVC clothing, PVC gloves and boots.
<b>Environmental Precautions:</b>	Prevent entry into sewers and watercourses
<b>Methods for clean-up:</b>	
<b>Small Spill:</b>	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.
<b>Large Spill:</b>	Not Available

**VII. HANDLING AND STORAGE**

<b>Handling:</b>	Keep containers tightly closed. Avoid producing or diffusing dust into the air.
<b>Incompatible products:</b>	Not Available
<b>Engineering Measures:</b>	Not Available
<b>Storage:</b>	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**

<b>Exposure Limits:</b>	2,2-Dibromo-3-nitrilopropionamide
<b>OSHA Permissible Exposure Limits (PELs):</b>	Not Available
<b>American Conference of Governmental Industrial Hygienists (ACGIH):</b>	Not Available
<b>Threshold Limit Values (TLVs):</b>	Not Available
<b>Other Exposure Limits:</b>	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)
<b>Appearance:</b>	White to off-white crystalline solid or powder of mild antiseptic odor	
<b>Odor:</b>	N/d	
<b>Odor Threshold:</b>	N/A	
<b>pH(neat, 10%, or 1%):</b>	N/d	
<b>Specific Gravity:</b>	2.375 (21°C)	
<b>Relative Density:</b>	N/A	
<b>Melting/Freezing Point:</b>	123 – 125 C	
<b>Initial Boiling Point and boiling range:</b>	Not applicable (decomposes)	
<b>Flash Point:</b>	N/A	
<b>Solubility (water):</b>	17±0.05 g/l at 25.7°C	
<b>Solubility in other solvents</b>	acetone - 35 g/100g ethanol - 25 g/100g dimethyl formamide - 120 g/100g polyethylene glycol (Mw 200) - 120 g/100g	
<b>Intrinsic Viscosity:</b>	N/A	
<b>Flammability (solid, gas):</b>	N/A	
<b>Upper/Lower flammability limits:</b>	N/A	
<b>Vapor Pressure:</b>	8.25x10 <sup>(-4)</sup> mmHg (25°C)	
<b>Vapor Density:</b>	Not applicable under standard conditions	
<b>Evaporation rate:</b>	Not applicable under standard conditions	
<b>Auto-ignition Temperature:</b>	N/A	
<b>Decomposition Temperature:</b>	190°C	
<b>Partition coefficient: n-octanol/water:</b>	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: Br<sub>2</sub>, HBr, CNBr, NO<sub>x</sub>, C<sub>2</sub>H<sub>5</sub>Br, CH<sub>3</sub>Br

**XI. TOXICOLOGICAL INFORMATION****Acute Toxicity:**

- Rat oral LD<sub>50</sub> 308 mg/kg
- Rabbit dermal LD<sub>50</sub> >2,000 mg/kg
- Rat inhalation LC<sub>50</sub> 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.

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

STOT-single exposure: No effects on specific target organs have been identified

STOT-repeated exposure: Excessive repeated exposure may increase the blood and tissue 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-LC<sub>50</sub>, 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*)
- 48 Hour-EC<sub>50</sub>, *Daphnia magna* 0.86 mg/l

**Avian toxicity:**

- Oral LD<sub>50</sub>, Bobwhite quail 354 mg/kg
- Dietary LC<sub>50</sub>, Mallard duck > 5,620 ppm
- Dietary LC<sub>50</sub>, 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: UN3082  
 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: UN3082  
 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: UN3082  
 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, 29 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:**

<b>Australia</b>	Listed in AICS
<b>Canada</b>	Listed in NDSL
<b>China inventory</b>	Listed
<b>EU</b>	Reported in EINECS
<b>Korea</b>	Listed in the Korea Existing Chemicals Inventory (KECI), number KE-09944
<b>New Zealand Inventory</b>	Listed in NZI
<b>Philippines</b>	Listed in PICCS
<b>15.2 Chemical Safety Assessment</b>	A Chemical Safety Assessment has not yet been carried out under the REACH Regulation.
<b>EU DIRECTIVES</b>	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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Prepared By: L. Rice