



Mergal® 530

Fast-acting, environmentally-friendly, broad spectrum biocide for control of bacteria, fungi, and algae in industrial systems.

Description	<p>Mergal® 530 is a broad spectrum, quick kill, fast dissipating biocide that carries a low environmental impact. Mergal 530's non-oxidizing yet extremely rapid biocidal mechanism makes it ideally suited for a wide variety of industrial applications. Based on 2,2-Dibromo-3-nitrilopropionamide (DBNPA) chemistry, Mergal 530 is compatible with most other additives such as organic biocides, chlorine treatments, dispersants, surfactants, thickeners, corrosion inhibitors and scale inhibitors. Mergal 530 is formaldehyde free and is not expected to add residual VOC to the treated product or system when used properly.</p>
Performance	<p>Mergal 530 provides an antimicrobial effect within 5 minutes of addition and can establish full microbiological control within 30 minutes, hence the product number "5-30". Mergal 530 delivers broad spectrum efficacy early in the wet-state production process so that the final preservation program works more cost effectively. Because of its ability to quickly eradicate microorganisms and bring contaminated systems under control, Mergal 530 plays a key role in maintaining good plant hygiene. In addition, Mergal 530 enhances the performance of biostats, such as benzisothiazolin (BIT). Proper use of Mergal 530 can help to improve overall microbiological quality control, treatment program performance, treatment cost optimization, and, ultimately, final product quality.</p>
Application/ Use	<p>Mergal 530 is completely miscible in water and easily incorporated into waterborne systems. It is registered for use in industrial preservation applications such as coatings, resins, emulsions, sealants, and caulks. It is also registered for re-circulating cooling water, paper mill white water systems, brewery/cannery pasteurizing water, metalworking cutting fluids, non-potable reverse osmosis systems, enhanced oil recovery systems, and publically owned treatment works. Mergal 530 has been used effectively to control microbiological growth in process water and raw materials prior to their addition to the process. This versatile antimicrobial can be used as part of a clean water flush during process shutdown and at start-up for maintaining plant hygiene and maximizing the effectiveness of the microbiological control / preservation program. Finally, Mergal 530 can be used to treat industrial products to enhance the life span of secondarily applied preservatives. Troy Corporation is uniquely qualified to determine if Mergal 530 is right for your application as part of a comprehensive solution to microbiological problems.</p> <p>For many applications, an initial dosage of 200-500 ppm (v/v) of Mergal 530 is recommended. Do not mix Mergal 530 with other additives. Mergal 530 should be added to the process using a metering pump at a location where good mixing occurs. Efficient and optimum dosage for your specific system can be determined through microbiological testing.</p>
Physical Properties	<p>The following are typical properties of Mergal 530; they are not to be considered product specifications.</p> <p>Appearance: Clear colorless to amber liquid Specific Gravity, 20°C [g/ml]: 1.15 – 1.30 g/cc pH: 2.5 – 4.5 Active ingredient: 2,2-Dibromo-3-nitrilopropionamide (DBNPA) Active concentration: 20%</p>

**FDA Clearances**

The active ingredient (DBNPA) in **Mergal® 530** is approved by the Food and Drug Administration (FDA) for the following applications.

- 21 CFR 175.105 Component of Adhesives used as Indirect Food Additives
- 21 CFR 176.170 Components of Paper and Paperboard in Contact with Aqueous and Fatty Foods
- 21 CFR 176.300 For use as Slimicides in the Manufacture of Paper and Paperboard intended to Contact Food.

**Low
Environmental
Impact**

Mergal 530 is formaldehyde free, is not expected to add residual VOC to the treated product or system when used properly, and rapidly breaks down into less toxic substances.

Product Stability

The active ingredient (DBNPA) is temperature sensitive and will decompose at elevated temperatures. To maximize shelf life stability, eliminate potential heat and energy sources such as sunlight, agitators, pumps, radiation, warehouse lights and heaters, and steam used to thaw frozen lines or containers. Store Mergal 530 away from incompatible substances in a dark, cool, dry, ventilated area. Monitor temperature in storage conditions that are adiabatic and take steps to prevent temperature from increasing. Prolonged contact with mild steel, iron, and aluminum piping, containers or equipment should be avoided to prevent possible corrosive effects to these metals.

**Regulatory
Considerations****Toxicity****Acute Oral Effects:**

LD50 (oral, rat) – 1387 mg/kg

Acute Skin Effects:

LD50 (dermal, rabbit) > 4000 mg/kg. Moderate skin irritation. This product is a skin sensitizer (based on Magnusson & Kligman maximization study).

Acute Eye Effects:

Corrosive (rabbit). Corneal damage may be irreversible if not washed from eyes promptly.

Acute Inhalation Effects:

LC50 (rat, 4 hr.) – 1.05 mg/L. (nose only)

Subchronic Effects and Other Studies

Developmental toxicity: Has been toxic to the fetus in lab animals at doses toxic to the mother. For additional information on active ingredients, contact Troy Chemical Corporation.

**Environmental
Effects****Ecotoxicity**

This product is moderately toxic to aquatic organisms on an acute basis.

LC50 (fish, 96 hr flow-through) – 1-10 mg/L.

Environmental Fate

The active ingredient 2,2-Dibromo-3-nitropropionamide degrades rapidly by anaerobic and aerobic aquatic metabolism into less toxic degradates. This product has a low potential to bio-concentrate

Octanol/water partition coefficient: LogP_{ow} – 0.8

Chemical Inventories

This product, or its components, are listed on, or are exempt from:

Country	Agency	Registration Number and Sections
United States	TSCA	10222-01-2
United States	EPA	47091-13-5383
Canada	DSL	10222-01-2
Europe	EINECS	233-539-7
Australia	AICS	10222-01-2
Korea	ECL Serial #	KE-09944
Philippines	PICCS	10222-01-2
China	IECSC	10222-01-2
New Zealand	NZIoC	10222-01-2

Labeling

Corrosive: Causes irreversible eye damage. May be fatal if swallowed. Harmful if inhaled or absorbed through skin. Do not get in eyes or on skin. Prolonged or repeated skin contact may cause allergic reactions in some individuals. Use with adequate ventilation. Wash thoroughly with soap and water after handling and before eating, drinking, using tobacco or using the toilet. Remove contaminated clothing before reuse.

Handling, Storage, Health And Safety

Avoid contact with skin, eyes or clothing. Avoid breathing vapor or mist. Wash thoroughly after handling. Keep container tightly closed. Use only with adequate ventilation. Store away from incompatible substances in a dark, cool, dry, ventilated area. Prolonged contact with mild steel, iron and aluminum piping, containers or equipment should be avoided to prevent possible corrosive effects to these metals. Do not contaminate water, food or feed by storage or disposal.

Observe all Federal, State, and Local regulations when storing or disposing of this substance.

Emergency Overview: Danger: Mergal® 530 is a clear colorless to amber liquid with a non-specific pungent odor. Corrosive. May be fatal if swallowed. May cause severe eye irritation and irreversible corneal damage. Excessive heat greater than 70°C (158°F) will result in decomposition to bromine compounds. Toxic to fish and aquatic organisms.

Shipping And Packaging

Mergal 530 is packaged in:

Shipping Container	Net Weight
Pails	44 lbs./ 20 kg.
Small Drum	150 lbs./ 68 kg.
Drums	550 lbs./ 249.5 kg.
Totes	2750 lbs./ 1247.4 kg.

DOT

This product does not meet the definition of any hazard class and therefore is not subject to DOT Regulations.

IATA

Shipping Name UN3265, Corrosive liquid, acidic, organic, n.o.s.
(Contains: 2,2-Dibromo-3-nitrilopropionamide)
8, PG III, ERG# 8L

Label Required Corrosive

IMDG

Shipping Name UN3265, Corrosive liquid, acidic, organic, n.o.s.
(Contains: 2,2-Dibromo-3-nitrilopropionamide)
8, PG III, EMS# F-A, S-B

Label Required Corrosive

For further information visit our website:
www.troycorp.com or call...

United States	Tel: 973-443-4200 Fax: 973-443-0258
Canada	Tel: 905-760-7902 Fax: 905-760-7904
Europe	Tel: 31-10-592-7494 Fax: 31-10-592-8877
Pacific	Tel: 66-2-361-4515 Fax: 66-2-361-4520
Brasil	Tel: 55-115575-0090 Fax: 55-115575-9080
Middle East & Africa	Tel: 44-162-878-1800 Fax: 44-162-867-6600

No warranty is made, whether expressed or implied, including warranties of merchantability or of fitness for a particular purpose for these products. No statements or recommendations contained herein are to be construed as inducements to infringe any relevant patent, now or hereafter in existence. Under no circumstances shall TROY Corporation or its affiliates be liable for incidental, consequential or other damages from alleged negligence, breach of warranty, strict liability or any other theory arising out of the use or handling of these products. The sole liability of TROY Corporation and its affiliates for any claims arising out of the manufacture, use or sale of its product shall be for the buyer's purchase price. Neither Troy Corporation nor any affiliates assumes any obligation or liability for the information in this document or the results obtained. The information in this document is provided without warranty and is to be utilized by customers of the products at the customer's sole risk. Customers should conduct their own tests in actual use conditions before commercial use of the products.

Polyphase®, MERGAL®, Micropel®, Troysan®, Troykyd®, Troythix®, Troysol™, Troymax™, Troysperse™, Powdermate®, Troyshield® and TroyGuard™ are Trademarks of Troy © 2010 Troy Corporation

