# Bronopol

This document provides a brief description of Bronopol, its uses, and the potential hazards associated with short and long term exposure. Environmental impact information for accidental releases is included. This information is general in nature and is not intended as a replacement for the safety data sheet (SDS), product label, and other safe handling literature. For additional information consult the LANXESS Corporation safety data sheet.

## Identification

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| **Chemical Name:** | 1,3-propanediol, 2-bromo-2-nitro- |
| **Synonym(s):** | 2-Bromo-2-nitro-1,3-propandiol<br>2-Bromo-2-nitropropane-1,3-diol<br>Propane-1,3-diol, 2-bromo-2-nitro<br>Bronopol |
| **CAS Number:** | 52-51-7 |
| **LANXESS Products Containing Bronopol:** | *For a list of materials containing Bronopol, please contact your LANXESS Corporation sales representative.* |

## Description

**Overview:** Bronopol is an off-white to white solid pellet/crystalline material at ambient temperatures. The odor is characterized as odorless to faint.

**Uses:** Bronopol is the “active” ingredient in several Environmental Protection Agency (EPA) Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) registered LANXESS products. These EPA registered products may be used in oil and gas, paper mill process water, industrial cooling water, paints and coatings, metalworking fluids, water based printing inks, pigments and mineral slurries, emulsions, absorbent clays, and adhesives.

**Properties:**

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| **Solubility in Water:** | Soluble |
| **Melting Point:** | >129°C (>264°F) |
| **Flash Point:** | >100°C (>212°F) closed cup |

## Potential Human Health Effects

### Occupational Exposure

Potential for occupational exposure exists during manufacture of products containing Bronopol as an additive or in the manufacture of other products containing during unloading, storage, staging and transfer operations at facilities. A much lower potential for exposure exists in facilities using the product in closed manufacturing processes by trained personnel.

### Employee Training

Workers handling Bronopol should be trained to implement proper handling procedures and to understand the potential health and physical hazards of this material. Process enclosures, explosion-proof local exhaust ventilation or other engineering controls should be used to keep worker exposure to airborne contaminants below any recommended or statutory limits. A NIOSH approved powered air-purifying particulate respirator with P-100 filters should be worn by all workers handling Bronopol. In addition, it is recommended to wear chemical splash goggles or a face shield, permeation resistant nitrile rubber or polyvinyl chloride gloves, suitable work clothing and foot protection be worn when handling materials containing Bronopol. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used.

### Consumer Exposure

LANXESS Corporation does not sell Bronopol, nor materials containing the organic compound, to the general public. The general population may only be exposed to the substance through dermal contact with materials containing the LANXESS FIFRA registered products.

### Short-Term Health Effects

Bronopol may be toxic if inhaled, harmful if swallowed, cause serious damage to the eyes, and/or irritate the skin. Symptoms of skin and/or eye contact may include redness, itching, swelling, burning, and possible permanent damage. Prolonged or repeated skin contact may cause an allergic reaction in some individuals. The substance may give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Symptoms of inhalation may include coughing, sore throat and runny nose. Ingestion may cause burns to the mouth, throat and stomach. Symptoms may include coughing, burning, ulceration, abdominal pain, nausea, vomiting and diarrhea.

### Long-Term Health Effects

Prolonged or repeated skin contact may cause an allergic reaction in some individuals. Once sensitized, subsequent exposure to Bronopol at very low levels may cause a severe allergic reaction. Symptoms may include redness, swelling and rash.

### Physical Hazards

Bronopol is stable under normal conditions of use. Avoid contact with oxidizing agents. The substance decomposes violently when heated above 140°C releasing toxic and irritating gases. Decomposition products may include carbon dioxide, carbon monoxide, nitrogen oxides and halogenated compounds. Avoid heat, open flames and other potential sources of ignition.

## Potential Environmental Impact

Bronopol is not readily biodegradable. An accidental release to the environment may pose a danger to fish (high toxicity), invertebrates (high toxicity) and aquatic plants (high toxicity) prior to degradation.

## Federal Insecticide, Fungicide, Rodenticide Act (FIFRA) Label

FIFRA products are registered by the United States EPA and are subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for Occupational Safety and Health Administration (OSHA) workplace labels of industrial chemicals. The pesticide label also includes other important information, including directions for use.

## Conclusion

Under normal conditions of anticipated use as described in this Product Safety Assessment, and if the recommended safe use and handling procedures are followed, 1,3-propanediol, 2-bromo-2-nitro- is not expected to pose a significant risk to human health or the environment.

## References

***Safety Data Sheet (SDS), Preventol P 100***, LANXESS Corporation

***European Chemicals Agency, Bronopol,*** Physical and Chemical Properties, *December 2017*

## Contact Information

LANXESS Corporation, Product Safety & Regulatory Affairs, 111 RIDC Park West Drive, Pittsburgh, PA 15275-1112, USA, Phone 1-800-526-9377 [1-800-LANXESS]

## Notices

### Use and Application Information

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether they are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with patents covering any material or its use. No license is implied or in fact granted under the claims of any patent.