

Mergal® K12N is a formulated triple active combination chemistry consisting of fast acting isothiazolinones and bronopol. It is designed to be highly effective against a broad spectrum of bacteria and fungi.

### Application & Use

Mergal® K12N is a clear, low VOC liquid product easily incorporated into water-containing or water-miscible technical products. Mergal® K12N is recommended for starch and thickener solutions, tank-side treatment of metalworking fluids, adhesives, sealants, pigment/clay dispersions, and waterborne paint.

This product is suitable for systems with a pH of 3 - 9 and at a temperature up to 60°C.

### Product Highlights

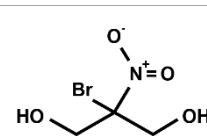
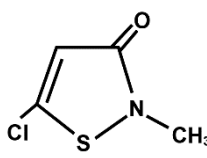
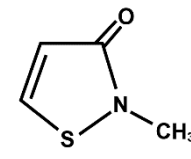
- Fast-acting triple active broad-spectrum preservative
- Highly effective recovery of spoiled raw materials
- Long-term preservation at acidic to neutral pH
- Cost-effective
- FDA clearances
- Globally approved active ingredients

### Physical Properties

The following are typical properties of Mergal® K12N; they are not to be considered product specifications.

<b>Appearance:</b>	Clear colorless to yellow
<b>Specific Gravity, 25°C:</b>	1.0 - 1.1
<b>pH (as is)</b>	4.2
<b>Solubility</b>	Miscible with water in any proportion

### Active Substance

7.1%	2-Bromo-2-nitro-1,3-propanediol	Bronopol		<b>Bronopol</b> $C_3H_6BrNO_4$
0.8%	5 Chloro-2-Methyl-4-isothiazolin-3-one	CMIT		<b>CMIT</b> $C_4H_4ClNOS$
0.3%	2-Methyl-4-isothiazolin-3-one	MIT		<b>MIT</b> $C_4H_5NOS$

## Function/Activity

Mergal® K12N demonstrates enhanced activity over conventional isothiazolinone biocides. It provides long-term effectiveness against repeat intrusions of microorganisms. Mergal® K12N is well suited to systems that contain some residue redox agents where conventional isothiazolinone biocides suffer loss of activity. Mergal® K12N is an excellent choice for these applications as it is a synergistic combination. The level required to protect or treat any particular system depends on a variety of factors, including the initial level of microbiological contamination, the components of the system, the likelihood of exposure to repeat microbiological intrusions, residual reducing and oxidizing agents, and the temperature and pH of the system. Suggested use levels should be verified by field trials and are reported as percentage of the end-use product. Typical use rates are between 0.10 - 0.30% by total formulation weight.

Function	% Wt/Wt
Adhesives/Glues	0.10 - 0.30%
Building Materials	0.05 - 0.30%
Emulsions, Paints & Coatings	0.05 - 0.30%
Fountain Solutions/Inks	0.10 - 0.30%
Metalworking Fluids	0.10 - 0.50%
Mineral Slurries & Pigment Dispersions	0.10 - 0.50%
Textile Finishes & Lubricants	0.10 - 0.50%

## Formulating Considerations

Mergal® K12N should be added with good agitation or mixing and at any stage of the production process. The actives are also susceptible to rapid degradation under reducing conditions, but are generally stable under oxidizing conditions. The actives in Mergal® K12N are not typically long-term stable when formulated into products containing amines or sulfides. Mergal® K12N should not be added into products containing secondary amines. For best results and to achieve a homogeneous distribution, Mergal® K12N should be added as early in the production process as possible provided there are no adverse conditions present (e.g. temperature > 60°C). Under certain conditions, especially in the presence of aluminum or iron, bronopol may cause discoloration.

Due to various possibilities of application and different methods of processing, it is advised to check compatibility in the development of new products. Contact your Arxada representative for assistance.

Shelf-life is 18 months from date of manufacture.

## Packaging

Mergal® K12N is packaged in:

Package Type	Net Weight
Large Drum	441 lbs / 200 kg
Tote	2400 lbs / 1088 kg

## Product Safety & Additional Information

For handling, storage, health, and safety information and disposal procedures, as well as additional information, please refer to the Safety Data Sheet (SDS) and label.



For more information visit:  
[www.arxada.com](http://www.arxada.com)

**Use biocides safely. Always read the label and product information before use.** All product information corresponds to Arxada's knowledge on the subject at the date of publication, but Arxada makes no warranty as to its accuracy or completeness and Arxada assumes no obligation to update it. Product and safety information is intended for use by recipients experienced and knowledgeable in the field, who are capable of and responsible for independently determining the suitability of ingredients for intended uses and to ensure their compliance with applicable law. Proper use of this information is the sole responsibility of the recipient. Republication of this information or related statements is prohibited. Information provided by Arxada is not intended and should not be construed as a license to operate under or a recommendation to infringe any patent or other intellectual property right. No claims are made herein for any specific intermediate or end-use application. The information contained in this document is proprietary and confidential. The recipient shall keep this document strictly secret using at least the same level of measures as it uses to protect its own confidential information, but in any case at least commercially reasonable own confidential information, but in any case at least commercially reasonable and

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