



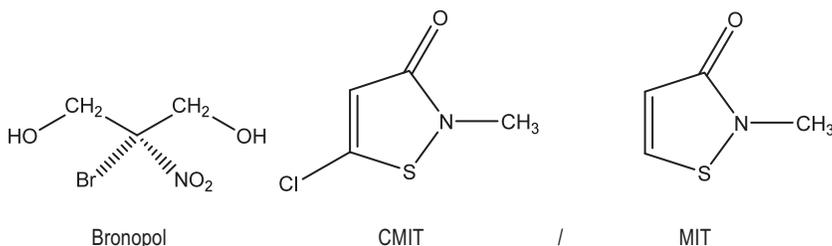
BIOBAN™ BPK 114 Preservative

2-bromo-2-nitropropane-1,3-diol	CAS# 52-51-7
5-chloro-2-methyl-4-isothiazolin-3-one	CAS# 26172-55-4
2-methyl-4-isothiazolin-3-one	CAS# 2682-20-4

General

BIOBAN™ BPK 114 Preservative is a broad spectrum, highly effective biocide formulation developed for the complete protection of textile chemicals and finishes, emulsions, paints, coatings and industrial water systems against bacteria, yeasts, and fungi. BIOBAN BPK 114 is an aqueous solution of 5-Chloro-2-methyl-4-isothiazolin-3-one (CMIT) and 2-Methyl-4-isothiazolin-3-one (MIT) and Bronopol.

Structures



Physical Properties

The following are typical physical properties of BIOBAN BPK 114 Preservative; **they are not to be considered product specifications.**

Appearance:	Clear, colorless to pale yellow
pH (neat):	2-5.5
Solubility in water (20°C/68°F):	Completely miscible
Viscosity (20°C/68°F):	20 cp
Density (20°C/68°F):	1.13 g/mL
pH Compatibility:	3-9
Total active ingredient	14% (w/w)

Special Features and Benefits

- Fast acting
- Low odor
- Low color
- Proven efficacy for the decontamination and preservation of textile chemicals and finishes.
- Broad compatibility with commonly used Full Draw Yarn (FDY), Pre-oriented Yarn (POY) and Un-drawn yarn (UDY) finish oil.
- Suitable for preservation and prevention of microbial growth in aqueous, and water miscible chemicals and formulations
- Broad spectrum efficacy against bacteria, yeasts, and molds
- Low, cost-effective use levels
- Good chemical stability and good compatibility when used in combination with some additives used, e.g. antiscalting agents, surfactants.

Antimicrobial Activity

BIOBAN™ BPK 114 Preservative has a broad spectrum of activity which includes these common spoilage microorganisms:

Microorganism	MIC* (ppm)
Bacteria	
<i>Klebsiella pneumoniae</i>	20
<i>Pseudomonas aeruginosa</i>	39
<i>Escherichia coli</i>	20
<i>Enterobacter aerogenes</i>	20
<i>Staphylococcus aureus</i>	20
<i>Pseudomonas putida</i>	<5
<i>Salmonella choleraesuis</i>	20
Fungi and yeasts	
<i>Aspergillus niger</i> ATCC # 16404	20
<i>Candida albicans</i> (yeast) 1	<5
<i>Penicillium funiculosum</i>	<5

*MIC – Minimum Inhibitory Concentration

Applications/ Directions for Use

This formulation should be used in a manner consistent with its product information and labeling. BIOBAN BPK 114 is an effective preservative in most aqueous compositions. For protection against bacterial contamination, a concentration of BIOBAN BPK 114 ranging from 0.05 to 0.2% is generally adequate.

Textile chemicals and finishes

BIOBAN BPK 114 can be added into fresh spinning finish oil emulsion daily, 100-400g per tonne finish oil emulsion. It's compatible with commonly used FDY, POY and UDY finish oil.

Paints and Coating

BIOBAN BPK 114 can be added into paints & Coating for preservation, typical suggested concentration range is 0.05-0.2%.

Cooling towers: small and medium size once-through systems as well as recirculating systems

BIOBAN BPK114 can be added continuously or intermittently to the basin, by using a metering pump. The product is compatible with commonly used surfactants and other anti-scaling agents.

Mineral oil extraction: preservation of drilling muds, fracturing fluids, completion and work-over fluids.

BIOBAN BPK114 is suitable for use in tertiary (Enhanced Oil Recovery) processes. The product is compatible with commonly used anionic resins in EOR operations and with H2S scavengers. BIOBAN BPK 114 can be deactivated by oxygen scavengers, if they are sulfide and bisulfite based.

Water circuits in paper mills

BIOBAN BPK114 provides a good combination of fast killing and preservation of water circuits in paper mills.

Application uses are governed by country-specific approvals. Please check with your Dow representative for information on use for your individual requirements.

Laboratory Services

Dow Microbial Control Technical Laboratories, located globally, are available to assist in the determination of optimum use level required for a specific application. While BIOBAN™ BPK 114 Preservative is compatible with most raw materials used in microbiologically susceptible products, Dow Microbial Control can also assist with compatibility assessments for specific applications.

Containers

BIOBAN BPK 114 Preservative is available in 20kg plastic pails and 120kg plastic drums.

Toxicology and First Aid

Please refer to the Safety Data Sheet.

Storage, Handling, and Disposal

Please refer to the Safety Data Sheet.

BIOBAN BPK 114 Preservative should be stored at temperatures within the range of 4°C to 40°C (40°F to 104°F). Containers should not be exposed to direct sunlight. Storage conditions should also be in conformance with applicable legal, fire, and insurance regulations.

Prior to disposal, the residual contents of BIOBAN BPK 114 Preservative containers should be drained into the product to be preserved. A small quantity of BIOBAN BPK 114 Preservative will likely remain in the container; this should be deactivated and drained to waste.

Container disposal – Triple rinse used containers prior to disposal. Send water from cleaning of used drums to waste handling facility and dispose of containers as permitted by local regulations.

The active ingredients in BIOBAN BPK 114 may be easily deactivated or neutralized by the addition of excess or acidified sodium bisulphite or sodium metabisulphite. Large excess of the deactivating solution is needed to ensure rapid neutralization. Usually ten-fold excess of a 20% neutralizing solution should completely deactivate the active ingredients. Care should be taken to prevent contact with any exposed skin of the personnel conducting the clean-up.

Product Stewardship

Dow Microbial Control encourages its customers to review their applications of Dow Microbial Control products from the standpoint of human health and environmental quality. To help ensure that Dow Microbial Control products are not used in ways for which they are not intended or tested, Dow Microbial Control personnel are willing to assist customers in dealing with ecological and product safety considerations. Contact your representative if you need any assistance or information. When considering the use of any Dow product in a particular application, review the latest Safety Data Sheet and country-specific product label to ensure the intended use is within the scope of approved uses and can be accomplished safely. Before handling any of the products mentioned in the text, obtain available product safety information and take necessary steps to ensure safety of use.

For further information visit our website:

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