

## K-BIO® BMc PRESERVATIVE

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### General Description

Frequently, technical products are difficult to protect by conventional preservatives. Many biocidal ingredients are destroyed for example by high temperature or alkalinity and as a consequence are deactivated. The **K-BIO® BMc** range is well suited to protect such products.

**K-BIO® BMc** is based on a combination of Benzisothiazolone (BIT), Methylisothiazolone (MIT) and low contents of Chloromethylisothiazolone (CIT). These three active ingredients have synergistic properties thus giving a well-balanced broad spectrum of antimicrobial activity. **K-BIO® BMc** does not contain any formaldehyde or formaldehyde releasers, it does not contribute to VOC thus **K-BIO® BMc** is a modern and environmentally beneficial biocide.

The **K-BIO® BMc** range offers different ratios and concentrations of the actives BIT, MIT and CIT, to adapt the preservative system to best meet the demands of the final application and the customer. More details about different **K-BIO® BMc** types can be given by our sales and technical staff upon request.

Usually a high content of BIT and MIT is combined with a low content of CIT. Studies demonstrate that even amounts of less than 1 ppm CIT increase significantly the initial microbiocidal activity of a BIT/MIT system.

Even in alkaline systems the killing effect of the CIT can be measured. At a pH higher than 8.5 CIT acts as preservative booster during production and filling. When the final product is stored the CIT is not stable in the long-term and will not remain in the product.

**K-BIO® BMc** complies with German Federal Health Authority's (BgVV/BfR) recommendations XIV and XXXVI and is allowed for use in the production of food packaging materials.

### Typical Properties

Active Ingredient:	
1,2-benzisothiazolin-3-one	≤5
2-methyl-3(2H)-Isothiazolone	≤5
5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1)	≤1
Physical Form	Milky greenish
pH, as is	3 to 6
Density	approx. 1 g/ml
Odour	Non specific

### Antimicrobial Spectrum

The synergistic combination of **K-BIO® BMc** provides a well-balanced broad spectrum of activity against gram-positive and gram-negative bacteria, yeast and fungi. This typically allows low use concentrations.

## Application and activity

In Can Preservation

**K-BIO® BMC** has been proven to be an effective preserving system for emulsion paints, adhesives, plasters, latex and wax emulsions. The excellent compatibility to alkaline media makes **K-BIO® BMC** a well suited preservative for higher pH paints and binders, especially pure acrylics.

Further Applications

Technical aqueous solutions, emulsions and dispersions, like starch preparations, inks and kaolin and pigment slurries.

## Use Recommendation

**K-BIO® BMC** -types are generally applied at concentrations in the range of 0.05 % to 0.2 %. The exact dosage depends on the product formulation and can be determined by suitable laboratory testing. The staff of CDI microbiological laboratories will be pleased to give customers the appropriate Support.

## Safety, Handling, Storage and Disposal

During handling of **K-BIO® BMC** the usual precautions for the handling of chemicals should be followed. Avoid contact with skin. Wear goggles and gloves. In the event of a spillage cleanse the skin with plenty of water and soap, flush eyes with water and a buffer solution.

Transport classification in accordance to ADR/RID, see MSDS.

Storage is recommended in tightly closed original containers at temperatures between 15 °C and 25 °C.

Storage time should not exceed 12 months.

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