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## **Althosan MB**

### **TECHNICAL DATA SHEET** **TL 067/2001**

Date of issue: 04.04.2002

Revision date: 21.12.2011

#### **Product characteristics**

**ALTHOSAN MB** is an aqueous solution of alkyle-dimethyl-benzyle-amonium chloride.

Name INCI: BENZALKONIUM CHLORIDE

Name according to european formulary: benzalkonii chlordium

#### **Use**

**ALTHOSAN MB** inhibits the growth of bacteria, moulds and yeasts. Its use is very vast:

- production of disinfecting agents for households, medical facilities, veterinary facilities as well as food industry
- inhibition of microbial corrosion in oil industry
- it is also used in pharmaceutical industry for the production of leather antiseptic preparations and hygienic, moistened napkins
- it is used as preservative in cosmetics
- it is used for formulations of special dish-washing and cleaning preparations
- fungicidal agent for destroying mosses and algae.

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## **Product features**

**ALTHOSAN MB** is a pure, colourless up to slightly yellowish liquid of a cationic character. It is miscible with either cold or even warm water in all proportions during the pure solutions origination. The solutions are stable.

## **Biological activity (Source: Wikipedia.org)**

**ALTHOSAN MB** features high antimicrobial efficacy against wide range of gram-positive bacteria, moulds, algae and yeasts. **ALTHOSAN MB** is quickly efficient biocidal substance. It is effective against bacteria, some viruses, fungus, protozoons etc. Bacterial spores are regarded as resistant.

**ALTHOSAN MB** effects in relation to the concentration of bacteriostatically or bactericidally. Gram-positive bacteria are more sensitive in general compared with gram-negative ones.

The effectiveness of **ALTHOSAN MB** is not influenced by pH dramatically, however, it (effectiveness) surges the higher the temperature is and the longer the exposure time is. Newer preparations utilize **ALTHOSAN MB** in combination with other amonionium quaternary derivatives to enhance the biocidal spectrum as well as effectiveness of disinfecting agents.

These combinations might be utilized, for instance, for the virucidal product activity improvement destined for disinfection in medical facilities. **ALTHOSAN MB**'s solutions are neutral and slightly alkalic, do not cause corrosion of a metallic surfaces, do not leave stains and do not emit harmful vapours. It is also possible to apply them all (solutions) to all washable surfaces.

The use of suitable auxiliary agents can better effectiveness even cleaning ability of the product substantially. On the other hand, presence of an organic and inorganic dirt may lower the effectiveness dramatically. **ALTHOSAN MB** is not compatible with soap and anionic surface active agents. Hard water and presence of salts may also curb its biocidal activity.

**Althosan MB** must comply with these quality signs:

Quality sign	Value	Methodology of setting
Active substance content (%)	48 minimum	ČSN EN ISO 2871-2
pH of 1% water solution	6 up to 8	PN-ZM 067/2001
Molecule weight (g.mol <sup>-1</sup> )	355	
Free amine and amine hydrochloride (%)	2 maximum	PN-ZM 067/2001
appearance of 1% aqueous solution	pure	PN-ZM 067/2001

## **Product manufacturing**

As already said above, **ALTHOSAN MB** is known for its high microbial effectiveness against the wide spectrum of grampositive and gram-negative bacteria, moulds, mosses and yeasts. It is therefore used in production of disinfectants and sanitary cleaning products for various types of use such as part of slimicides in water circulation units or such as part of preparations for antimicrobial modification of textile fibres and feathers.

**Anion-active substances and the substances with polygenic ions cause the coagulation of an active compound contained in ALTHOSAN MB and deactivate the product biologically. From that reason their mutual application with ALTHOSAN MB is contradictory!!**

**ALTHOSAN MB** is used as a basic substance for the production of biocidal preparations. The composition and recommended dosage must be formulated according to the needs of below mentioned active substance concentrations (BENZALKONIUM CHLORID). Marketing of the biocidal preparations is governed by appropriate laws.

### **1. Disinfectants**

In the concentration of 1 – 5 grams a 1 liter as a universal disinfectant for the floor protection, walls, sanitary utilities, spas, cloak rooms, surgical and cosmetic tools and clothing.

## 2. Sanitary cleaning products

In the concentration of 0,5 grams a 1 liter as a sanitary and cleaning products of machinery and tanks in dairies and food industry. When used on machines there is a need to wash up.

## 3. Alga removing products

ALTHOSAN MB is suitable for swimming pool alga removal, cooling towers, water tanks and so on. For the application very low concentration from 0,2 to 0,5 liter a 10 m<sup>3</sup> of water is sufficient. This amount is sufficient to eliminate the compound of green alga (Chlorophyceen) and red alga (Rodophyceen) and make them dissipate. To keep the water tanks pure only the addition of less than 0,05 liter to 10 m<sup>3</sup> a week suffices.

## 4. Agriculture

Disinfectant and deodorant for the application in horse stables, wholesalers, for traffic vehicles, storages, feedstuff and so on. Recommended concentration is from 4 up to 8 grams a liter.

## 5. Power industry

ALTHOSAN MB hinders the pipeline fouling in circulating and cooling mechanisms of thermal power plants and similar-like machines from alga and slime. The better flow of heat will be improved and the energy saving secured.

Dosage: for the first 4 weeks 5 grams of **ALTHOSAN MB** to 1 m<sup>3</sup> of water, later on 3 grams to m<sup>3</sup> of additional water.

## 6. Paper industry

Product is used as an anti-rotting and anti-sliming agent into the closed water systems and for the humid paper conservation. It has high absorbing abilities in connection to fibred as well as nonfibred compounds of paper suspensions.

Dosage: 500 grams to m<sup>3</sup> of water or 1 up to 3 kg a ton of dry paper substance.

## 7. Textile industry

Antimicrobial adjustment of carpets, floorings, decorative and in-house textiles, upholstery, fillings from feathers, matrices, hats, socks, stockings and so on. The product is massive on keratins fibers a modification at the other types of fibers is gradually removing by the washing. In the concentration of 4 up to 6 % from the weight material ALTHOSAN MB is applied by spraying, soaking or impregnating.

## 8. Washing-up products

**ALTHOSAN MB** may be combined with softening agents for the fabric conditioner formulation after washing up. It also disinfects the cloth (especially that one from the synthetic fibers), removes personal scents originating by the sweat decomposition.

## Packing and storage

**Althosan MB** is delivered in PE casks at the volume of 50 liter, eventually in other containers, that have been discussed in advance. It is stored in closed containers at the places protected from direct weather influences. Recommended storing temperature is within +5 up to +25 °C.

## Transport

**ALTHOSAN MB** is transported in covered vehicles according to the ADR/RID regulations.

## Warranty

If the product is transported and stored according to the above mentioned conditions, the warranty is 6 months from the date of stock-out.

## Note

Data about the product characteristics and its manufacturing were acquired by laboratory measurements and application tests. This technical sheet can only give a legal advice without any obligation. The manufacturing of the product must be adjusted to the specific conditions.