ROCIMA™ 520S Biocide
Preservative for Aqueous Binder Dispersions and Other Technical Products

**General**

ROCIMA™ 520S Biocide is a liquid in-can preservative for universal use in technical products.

The optimized ratios of the chemically different active principles of ROCIMA 520S provide excellent bacterial and fungal control and help to prevent the growth of resistant strains of microorganisms.

ROCIMA 520S contains active substances permitted by the BfR and FDA for use in their application field, provided that the customary dosage rates are not exceeded.

ROCIMA 520S may be employed in binders for final products to be used in close proximity to food, but not in immediate contact. ROCIMA 520S is a preparation of chlormethyl-/methylisothiazolone and bronopol.

**Physical Properties**

The following are typical properties of ROCIMA™ 520S Biocide; they are not to be considered product specifications.

- **Appearance:** Colorless to yellowish, clear liquid
- **Color (Gardner):** 3 ISO 4630
- **Density 20°C:** 1.100 - 1.1200 g/cm³ ISO 2811-3
- **Refractive index n 20**: 1.3760 - 1.3860 ASTM D 1218-02
- **Viscosity η 20°C:** 2.0 - 15.0 mPa.s ISO 2555
- **pH as is:** 2 - 6 IN 7463 ACM
- **Flash point:** >100°C o.c. Cleveland ISO 2592

**Miscibility/Solubility**

Forms clear solutions in all proportions with water, low alcohols, and glycol ethers.

**Compatibility**

ROCIMA 520S is compatible with most common binders. It is generally advisable to check compatibility prior to any application.

**Stability**

- **Temperature:** up to 40°C (short period to 60°C)
- **pH range:** 4 to 9

**Application and Activity**

ROCIMA™ 520S Biocide has been developed especially for preservation of aqueous dispersion and emulsion binders. However, it can generally be used in technical products, after biological testing has been carried out.

ROCIMA 520S contains neither cationic nor phenolic substances. Therefore, it is particularly suited for use in products not compatible with these substances.
ROCIMA™ 520S Biocide has a broad spectrum of activity. It is effective against gram-positive and gram-negative, aerobic and anaerobic bacteria together with various species of mold and yeast.

ROCIMA 520S complies with several food contact legislations of the European Union and of the Food and Drug Administration (FDA) of the USA. For specific information contact your Dow representative or liaise with our Product Integrity Department.

The number of technical products being preserved with ROCIMA 520S is increasing steadily and it is not always possible to predict its suitability. The optimum use should be established by preliminary experiments. In critical cases, predilution with water is often helpful.

**Dosage**

ROCIMA™ 520S Biocide, due to its good effectiveness, only requires small amounts to be added for complete in-can protection. As a general guideline the usage of 0.1% in relation to the total formula is recommended.

The dosage rates of an in-can preservative depend upon the degree of contamination and susceptibility of the raw materials used in the formulation.

The following concentrations are recommended as a guideline only:

<table>
<thead>
<tr>
<th>Material</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paints</td>
<td>0.05 - 0.30%</td>
</tr>
<tr>
<td>Glues, adhesives</td>
<td>0.10 - 0.33%</td>
</tr>
<tr>
<td>Plasters, binders</td>
<td>0.05 - 0.25%</td>
</tr>
<tr>
<td>Thickener solutions, pastes</td>
<td>0.10 - 0.30%</td>
</tr>
</tbody>
</table>

Our Biological and Application Laboratories are at your disposal for the solution of microbiological problems.

As a further preventive measure against bacterial infections we advise to pay full attention to the cleanliness of storage and production facilities.

For regular cleaning and disinfection of manufacturing facilities, tubings, storage containers, etc., we recommend the use of a 0.5% solution in water of ROCIMA™ 101.

**Handling and Storage**

**Handling**

Please refer to the Safety Data Sheet (SDS) of this product for precise handling instructions.

The processing and use of industrial chemicals require adequate technical and professional knowledge.

In general, avoid eye and skin contact, wear safety goggles, gloves and protective clothing. In case of eye or skin contact despite precautionary measures, wash immediately and thoroughly with plenty of warm water and obtain medical attention.

The legal requirements prevailing in your country, especially on working hygiene and in the avoidance of accidents, must be observed.
Storage
ROCIMA™ 520S Biocide should be stored in tightly sealed original containers in a cool place. Below 0°C crystallization can take place. After simply warming up to room temperature, preferably by stirring, the crystals will redissolve and ROCIMA 520S can be used without any loss in effectiveness.

Product Stewardship

When considering the use of any Dow product in a particular application, review the latest Safety Data Sheet (SDS) and country-specific product label to ensure the intended use is within the scope of approved uses. Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products – from the initial concept and research, to manufacture, use, sale, disposal, and recycle each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including Safety Data Sheets (SDS), should be consulted prior to use of Dow products. Current Safety Data Sheets are available from Dow.

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