ROCIMA™ BT 2S Industrial Microbicide
EPA Reg. No. 80285-2-707

General
ROCIMA™ BT 2S Industrial Microbicide is a 20% solution of 1,2-Benzisothiazolin-3-one (BIT) in dipropylene glycol.

Physical Properties
The following are typical properties of ROCIMA™ BT 2S Industrial Microbicide; they are not to be considered product specifications.

- Composition: A solution of 1,2-Benzisothiazolin-3-one at 19% av. in dipropylene glycol and water
- Appearance: Clear yellow to amber liquid
- Viscosity: 200 to 500 cP
- pH: 12 to 13.5
- Flash point: >93°C (199°F)

Special Features and Benefits
- Broad spectrum activity in high pH systems, controlling bacteria and fungi (yeasts and molds)
- Active ingredient is stable up to 150°C providing increased processing flexibility
- Ease of handling due to its liquid form and good compatibility in most aqueous compositions.
- Stable in the presence of amines.

Used at recommended dose levels, ROCIMA™ BT 2S Industrial Microbicide is effective on a number of microorganisms including:

<table>
<thead>
<tr>
<th>Bacteria</th>
<th>Molds</th>
<th>Yeasts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bacillus megaterium</td>
<td>Alternaria radicina</td>
<td>Candida albicans</td>
</tr>
<tr>
<td>Bacillus subtilis</td>
<td>Aspergillus niger</td>
<td>Saccharomyces cerevisiae</td>
</tr>
<tr>
<td>Escherichia coli</td>
<td>Aspergillus penicilloides</td>
<td></td>
</tr>
<tr>
<td>Klebsiella pneumonia</td>
<td>Rhizopus stolonifer</td>
<td></td>
</tr>
<tr>
<td>Proteus vulgaris</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pseudomonas aeruginosa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salmonella typhosa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

U.S. Regulatory Clearances
BIT, the active ingredient in ROCIMA™ BT 2S Industrial Microbicide, complies with the following FDA clearances:

- 21 CFR 175.105, as a preservative of adhesives
- 21 CFR 176.170, as preservative for paper coating compositions, at level not to exceed 0.01 mg/in² of finished paper or paperboard in contact with fatty & aqueous food.
- 21 CFR 176.180, as preservative for paper coating compositions, at level not to exceed 0.02 mg/in² of finished paper or paperboard in contact with dry food.
- 21 CFR 176.300, slimicides (in manufacture of food contact paper of paperboard) at level not to exceed 0.06 lb. per ton of dry weight fiber
- 21 CFR 177.2600(c)(4)(ix), uncured latex rubber (consult regulation for limitations)
These clearances apply only to ROCIMA™ BT 2S Industrial Microbicide as supplied by Dow.

**Applications/Directions for Use**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

ROCIMA™ BT 2S Industrial Microbicide is an effective preservative in most aqueous compositions. The concentration required to give protection depends on several factors. These include the susceptibility of the system to microbiological degradation, the extent to which microorganisms can gain access, the species involved, pH, temperature, and length of time for which protection is required. Trials at different concentrations are recommended.

Typical applications and the suggested range of concentrations are shown below:

<table>
<thead>
<tr>
<th>Type of Material to be Protected</th>
<th>Pounds of ROCIMA™ BT 2S Industrial Microbicide Per 1,000 Pounds of Material to be Protected (% ROCIMA BT 2S based on total weight of product)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latices such as polymer latices based on monomers such as acrylate, butadiene, PVA or styrene; synthetic rubber/latex.</td>
<td>0.5 to 1.5 lb (0.05 – 0.15%)</td>
</tr>
<tr>
<td>Oil-in-water emulsions such as textile spin-finish solutions, cutting/rolling oils, soluble oils (metal and engineering industries), and photographic emulsions. Note: limit amount of ROCIMA BT 2S in metalworking fluid concentrate (to be diluted before use) to 3.0% to reduce the possibility of dermal sensitization.</td>
<td>0.5 to 1.8 lb (0.05 – 0.18%)</td>
</tr>
<tr>
<td>Paints and coatings such as aqueous coatings, water-based paints, and emulsion paints</td>
<td>0.5 to 2.5 lb (0.05 – 0.25%)</td>
</tr>
<tr>
<td>Inks and font solutions</td>
<td>0.5 to 2.5 lb (0.05 – 0.25%)</td>
</tr>
<tr>
<td>Water-based adhesives, including animal glues, adhesives based on carboxymethylcellulose (CMC) and derivatives, gelatin and/or latex</td>
<td>0.5 to 2.5 lb (0.05 – 0.25%)</td>
</tr>
<tr>
<td>Aqueous slurries of pigments such as titanium dioxide or of minerals such as kaolin, calcium carbonate, calcium sulfate, or magnesium sulfate</td>
<td>0.4 to 1.25 lb (0.04 – 0.125%)</td>
</tr>
<tr>
<td>Building materials such as caulks, sealants, grouts, spackling, ready-mix cement and wallboard compounds, and tape joint compounds</td>
<td>0.8 to 2.5 lb (0.08 – 0.25%)</td>
</tr>
<tr>
<td>Pesticide formulations, including in-can protection and protection of use dilutions</td>
<td>0.5 to 2.5 lb (0.05 – 0.25%)</td>
</tr>
<tr>
<td>Oil recovery materials, such as drill muds, packer fluids, and completion fluids, containing polysaccharide fluid loss control agents and/or thickeners such as starch, guar, or xanthan gum</td>
<td>0.5 to 1.5 lb (0.05 – 0.15%) of total weight of the fluid, or 15 to 45 lb per 1000 lb of dry polysaccharide</td>
</tr>
<tr>
<td>Secondary oil recovery injection water containing additives, such as polymer or micellar/polymer waterfloods using thickeners such as xanthan gum and/or polyacrylamides</td>
<td>0.15 to 1.5 lb of total weight of fluid (0.015 – 0.15%)</td>
</tr>
<tr>
<td>Leather processing solutions – to preserve the solutions</td>
<td>0.25 to 2 lb (0.025 – 0.2%)</td>
</tr>
<tr>
<td>Fresh animal skins and hides – To preserve the integrity of the hides and skins before or during processing. Add the appropriate quantity of ROCIMA BT 2S to the brine solution during the curing operation or treat hides or skins with an appropriately diluted aqueous solution during other portions of the processing operation. The specific use rate and contact time needed to control microbial attack will depend on the degree of decomposition of the hides or skins prior to treatment.</td>
<td>1 to 24 pounds (13 fluid ounces to 2.5 gallons) of ROCIMA BT 2S per 1000 pounds of hides or skins</td>
</tr>
<tr>
<td>Paper coatings to be used in papermaking, including rosin dispersions, starch and casein based products</td>
<td>0.5 to 1.5 lb (0.05 – 0.15%)</td>
</tr>
</tbody>
</table>
Pulp & paper mill system slime control – The preferred method of addition is by shock dosing because this ensures that a high concentration of ROCIMA™ BT 2S Industrial Microbicide is present in the system for several hours. If a slime control agent is added by continuous methods over periods of several hours, its concentration in the system at all times is low. This can lead to the development of resistant organisms, which is less likely to occur when the shock dosing method is used.

It is not possible to give precise recommendations as to the quantity of ROCIMA BT 2S to add to control slime formation, because the magnitude of the problem varies greatly from mill to mill, depending on the furnish employed, the cleanliness of the mill system, and the additional nutrients (for example, starch) that may be added to the stock.

The following quantities of ROCIMA BT 2S are suggested for trial:

**Shock dosing:** If this method is adopted, add 2.5 to 9 ounces of ROCIMA BT 2S for each ton of paper produced per day as a single shock dose, the actual quantity to be used depending on the severity of the slime problem. This addition may be made to any part of the stock preparation or backwater system. Alternatively, the addition may be made to those parts of the system where it is known that slime deposits accumulate.

**Continuous addition:** If this method is adopted, add ROCIMA BT 2S continuously for either the single period of 8 hours during every 24 hours or for two separate periods of 4 hours during every 24 hours. Meter ROCIMA BT 2S into the recirculated backwater at a rate of 7 to 8.5 ounces for each ton of paper produced during the dosing period.

---

**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.

**Storage**

ROCIMA™ BT 2S Industrial Microbicide should be stored at room temperature in tightly sealed original containers. Protect from frost and heat. Any supplies which do freeze must be mixed thoroughly after thawing before they can be used without any loss in efficacy.

**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 of 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.
For further information visit our website:
www.dowmicrobialcontrol.com
or call:

Central and Eastern Europe:
Turkey +90-216-571-16-00
Russia +7-495-663-78-20
Poland +48-22-543-18-00

Western Europe:
+380-3-694-6367 (toll-free)
+31-115-67-26-26 (phone)
+31-115-67-28-28 (fax)

North America:
+1-800-447-4369 (toll-free)
+1-989-832-1560 (phone)
+1-989-832-1465 (fax)

Middle East and Africa:
UAE +971-4-332-88-66
South Africa +800-99-5078 (toll-free)

Greater China:
Shanghai +86-21-3851-1000
Beijing +86-10-6527-9199
Guangzhou +86-20-3813-0600
Taiwan +886-227-718-000

Southeast Asia:
Philippines +63-2-867-3293
Indonesia +62-21-2995-6273
Singapore +65-6830-4575
+65-6796-6217
Thailand +66-2365-7371
Vietnam +84-8-3222-8000
Malaysia +603-7955-5200

Australia and New Zealand:
+61-3-9226-3500 (phone)
+61-3-9226-3562 (fax)

Japan and Korea:
Japan +81-3-5460-2261
Korea +82-2-3490-4348

Indian Subcontinent:
+91-22-6793-4953 (phone)
+91-22-6793-4924 (fax)

Latin America:
+55-11-5188-9555 (phone)
+55-11-5188-9400 (fax)

Other Global Areas:
+1-989-832-1560 (phone)
+1-989-832-1465 (fax)

Notice: No freedom from infringement of any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer’s use and for ensuring that Customer’s workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where Dow is represented. The claims made may not have been approved for use in all countries. Dow assumes no obligation or liability for the information in this document. References to “Dow” or the “Company” mean the Dow legal entity selling the products to Customer unless otherwise expressly noted. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

USE BIOCIDES SAFELY. ALWAYS READ THE LABEL AND PRODUCT INFORMATION BEFORE USE.