



BIOBAN™ 655 Antimicrobial

General

BIOBAN™ 655 Antimicrobial is a broad-spectrum bactericide based on 1,2-benzisothiazolin-3-one (BIT, CAS 2634-33-5) and 7a-ethylidihydro-1H,3H,5H-oxazolo[3,4-c]oxazole (EDHO, CAS 7747-35-5). It is a broad spectrum preservative used for non-food contact applications in paints and coatings, adhesives, household, industrial and institutional products, emulsions, inks and fountain solutions, textile spin-finish solutions, metalworking fluids, mineral slurries, and surfactants.

Special Features and Benefits

- Blend of biocide actives delivering a broad spectrum of antimicrobial activity.
- Fast acting and long lasting biocidal blend
- Effective over a pH range of 6-12
- Soluble in both aqueous and oil based systems.
- Low freezing point and excellent thermal and alkaline stability
- Low odor
- Compatible with ionic additives and a variety of other formulation raw materials
- Corrosion inhibition in many systems
- Alkaline buffering capability to prevent pH drift
- Assistance in maintaining optimum viscosity of emulsion formulations

Physical Properties

The following are typical properties of BIOBAN 655 Antimicrobial; **they are not to be considered product specifications.**

Active Ingredients BIT + EDHO (% nominal).....	30
pH (as supplied)	9-12.5
Appearance	Colorless to yellow
Freezing point.....	<0°C
Density @ 25°C.....	~ 1.06
Viscosity @ 25°C	~ 30 cps

Applications

Applications	Recommended dosage %
Adhesives	0.10-0.50
Household and Industrial products	0.15-0.50
Emulsions	0.15-0.50
Inks	0.15-0.50
Mineral slurries	0.10-0.20
Paints	0.15-0.50
Concentrated metalworking fluids (Based on diluted use at 5%)	3-10
Diluted metalworking fluids	0.15-0.5

The optimum use level should be evaluated through challenge testing or other appropriate testing by the customer or at a Dow Biocides Customer Application Center.

Instructions on Applications

Solubility Miscible in alcohols, glycerol, propylene glycol, hydrocarbons and water.
Recommended use pH..... Above pH 6 for best efficacy and longevity.
Maximum use temperature..... Good thermal stability up to at least 60°C when added to formulations.

Microbiological Efficacy

The efficacy of the product has been tested against various microorganisms by the determination of MIC (Minimum Inhibitory Concentration).

Microorganism	MIC (ppm of product)
Bacteria	
<i>Klebsiella pneumoniae</i> ATCC 4352	87
<i>Pseudomonas aeruginosa</i> ATCC 10145	293
<i>Pseudomonas aeruginosa</i> ATCC 15442	293
<i>Escherichia coli</i> ATCC 11229	130
<i>Enterobacter aerogenes</i> ATCC 13048	195
<i>Staphylococcus aureus</i> ATCC 6538	87
Fungi and yeasts	
<i>Aspergillus niger</i> ATCC 16404	293
<i>Candida albicans</i> (yeast) ATCC 10231	439
<i>Saccharomyces cerevisiae</i> (yeast) ATCC 9763	293

Reported MIC values shown demonstrate the spectrum of antimicrobial activity of the BIOBAN™ 655 Antimicrobial – the MIC tests only demonstrate the innate activity and should not be used as a guide to determine levels to use in your formulations.

Laboratory services

Dow Microbial Control Customer Application Centers, located globally, are available to assist in the determination of optimum use level required for a specific application. While BIOBAN 655 Antimicrobial is compatible with most raw materials used in microbiologically susceptible products, Dow Microbial Control can also assist with compatibility assessments for specific applications.

Compatibility with Materials of Construction

BIOBAN 655 Antimicrobial is compatible with the following materials of construction: 304 and 316 stainless steel, high density polyethylene, polypropylene, Nylon and Teflon.

Safety & Labeling – Environmental information

Please refer to the Safety Data Sheet and product label.

Storage

Shelf life	Two years from production date
Storage	4°C to 40°C. Containers should not be exposed to direct sunlight.

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.

BIOBAN™ 655 is a biocidal product intended for use in accordance with product type 6 and 13 of the Biocidal Product Directive 98/8/EC (BPD).

For further information visit our website:
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[†]except Indonesia and Vietnam

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