



BIOBAN™ 358 Antimicrobial

For Use in Exterior Paints, Coatings and Building Materials

General

BIOBAN™ 358 Antimicrobial is a VOC-free preservative for dry film applications that contains three different active ingredients (DCOIT , OIT and Diuron) for exceptional performance against a broad range of fungi and algae. It provides superior protection of all exterior coatings, where algae can be a challenge. Such surfaces are often covered with airborne particles from industrial production and internal combustion engines, soil and fertilizer, pollen and other particulates that can serve as substrates for microorganisms.

BIOBAN 358 Antimicrobial is a fluid, pumpable dispersion of active ingredients. It is easy to handle, meter and incorporate into aqueous systems.

Benefits

- Long-lasting broad spectrum protection: given the complementary nature of its three active ingredients, BIOBAN 358 Antimicrobial offers durable protection against the growth of fungi and algae.
- Two modes of protective action: One prevents the treated surface from serving as the substrate for contaminating micro-organisms to grow and proliferate; Two, when the surface becomes wet through rain or condensation; the controlled diffusion of the active ingredients into the wet phase prevents the growth of micro-organisms on the surface layer.
- Liquid, flowable dispersion: easily incorporated into formulations
- Free of carbendazim
- Free of IPBC and does not contribute to yellowing or chalking

Applications/ Directions for Use

BIOBAN 358 is an effective microbicide for use in paints and coatings which are applied on wood or mineral surfaces.

The combination of active ingredients combines a very broad and balanced spectrum of activity against surface moulds with a long term protection. Its protection against algae makes it suitable as the sole agent to protect the coating film from growth.

It contains a special stabilizer that optimizes performance and stability of the active ingredients in aqueous coating systems at elevated pH.

Good long-term activity of the coating cannot be achieved by the biocide alone. The formulation of the paint system as well as the correct dosage of BIOBAN 358 is an essential prerequisite.

If, due to faulty construction, the surfaces to be coated are permanently damp, remedial work must be done to correct this before a successful application of BIOBAN 358 can be achieved using an economical and ecologically reasonable dose. Your local Dow Microbial Control Representative will be happy to assist you with this issue.

BIOBAN™ 358 primarily develops its effect after the coating or plaster system has been applied.

BIOBAN 358 comes in the form of an aqueous, flowable and pumpable dispersion and is therefore easy to incorporate into the end product. A uniform and homogeneous distribution can be obtained by simple but thorough stirring.

BIOBAN 358 can be added at any phase of production provided thorough mixing is guaranteed. Should the manufacturing process involve heating of the product, it is advisable to add BIOBAN 358 after cooling down at the end of the process.

BIOBAN 358 microbicide is remarkably versatile with regard to its fields of application and the possibilities for processing. We recommend therefore that its applicability is checked by laboratory tests.

Should you encounter microbial problems or problems concerning special applications, please contact your regional customer application specialist.

The optimum dosage of microbicides depends largely upon the susceptibility of the coating to fungal and algal growth, the exposure to weathering, the thickness of the coating, the amount of dirt to be expected and the potential of the local environment to contaminate the surface.

For that reason, the concentration ranges listed below should be taken as general guidelines only:

Coatings, paints:	0.4-1.2 %
Plasters, fillers:	0.2-0.6%

It is recommended that the proposed dosages of BIOBAN 358 are checked in laboratory tests and if possible with practical external experiments as well. This applies to both the compatibility in the finished product and to the expected level of protection.

Paints treated with up to 1.0% of BIOBAN 358 are free of N-Label and Xi-Label.

Physical Properties

The following are typical properties of BIOBAN 358 Antimicrobial; **they are not to be considered product specifications.**

Appearance	Greenish dispersion
Odor.....	Mild
Active ingredient (AI) concentration.....	27.5%
Carrier.....	Water
Viscosity @ 20°C	70-90 KU
Specific gravity @ 25°C (water=1)	1.10
Particle size	0-40 µm

Active Ingredients

The active ingredients in BIOBAN™ 358 Antimicrobial are 4,5-dichloro-2-n-octyl-4-isothiazoline-3-one (DCOIT), 2-n-octyl-4-isothiazolin-3-one OIT and N'-(3, 4-dichlorophenyl)-N-N-dimethylurea (Diuron).

**Formulation
Compatibility**

BIOBAN 358 Antimicrobial is primarily designed for use in water-based systems; however, it can be used in solvent-based systems depending on its compatibility with the final product and its packaging.

Stability

The activity of BIOBAN 358 Antimicrobial will not be affected by short periods of temperatures up to 40° C during manufacturing, or by pH in the range 4 to 9. At higher pH we recommend the stability of BIOBAN 358 is verified in the final paint by laboratory testing.

**Storage, Handling
and Disposal**

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

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

In general, avoid contact with eyes, skin and clothing. Avoid breathing vapor. Use with adequate ventilation. When handling products directly, personal protective equipment, including chemical splash goggles, chemically resistant gloves and apron should be worn. 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.

BIOBAN 358 Antimicrobial should be stored in tightly sealed original containers and preferably at room temperature. Protect from frost and heat. Shelf life: One year from production date when stored as directed.

Any supplies which do freeze must be mixed thoroughly after thawing before they can be used without any loss of efficacy.

Due to its inherent characteristics dispersions may become partially inhomogeneous upon prolonged storage. We generally advise to mix such products before use.

Do not contaminate water, food or feed by storage or disposal. Excess product and rinse water has to be disposed according to local regulations for disposal. A small quantity of BIOBAN 358 will likely remain in the container; this container should be triple rinsed and the rinse water should be treated as waste. To ensure that containers are not reused, they should be pierced before disposal.

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.

Biocidal Products Directive Compliance: BIOBAN™ 358 is a biocidal product intended for use in accordance with Product Type 7 (Film Preservation) of the Biocidal Products Directive 98/8/EC (BPD).

Caution: Use biocides safely. Always read the label and product information before use.

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