

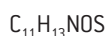
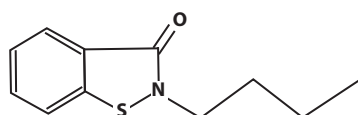
Densil® DN Antimicrobial

Summary

Densil® DN Antimicrobial is a broad spectrum fungicide, bactericide and algacide based on the active ingredient N-butyl-1,2-benzisothiazolin-3-one (BBIT). Densil® DN Antimicrobial can be used to prevent microbial degradation of various building construction materials in different application areas, to offer dry film and wet state preservation.

Many building construction materials can support the growth of a wide range of microorganisms, both in the wet state and on the dry film. Microbial colonization and growth in such material can result in aesthetic damage & loss of functional properties of the products.

Structure



Chemical Compatibility

The Densil® DN Antimicrobial active agent is a non-volatile liquid. Densil® DN Antimicrobial is compatible with anionic, nonionic and cationic surfactants, and most organic and inorganic compounds commonly used in paints, lattices and pigment slurries. The Densil® DN Antimicrobial active agent is stable across a wide pH range (2 – 12) and is stable in the presence of amines. Densil® DN Antimicrobial does not require zinc oxide or other stabilizers. Therefore, Densil® DN Antimicrobial can be used in clear transparent coatings. While it is not required for stability, Densil® DN Antimicrobial can be used in paints containing zinc oxide.

Densil® DN Antimicrobial may be deactivated, under certain conditions, by strong reducing or oxidizing agents, such as thiols, hypochlorites, bisulfites, and metabisulfites.

Amount to Use

The concentration required to adequately preserve a product 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.

Since the effective concentration can be dependent on several factors we recommend that compatibility/stability trials and microbiological challenge testing should be carried out before use.

Densil® DN Antimicrobial is found to be an effective wet state preservative at concentrations of 0.01% to 0.05% and effective dry film preservative at concentrations of 0.075% to 0.115%.

Example end use applications are shown below:

Paint and coatings

Add 0.075–0.115% Densil® DN Antimicrobial. Not for marine use.

Densil® DN Antimicrobial should be incorporated in the letdown stage of paint manufacturing. Since Densil® DN Antimicrobial is a concentrated high active content preparation, it may be advantageous to pre-mix it with a polyglycol or other carrier. Addition to the paint should be made slowly at a point in the manufacturing process that allows for good agitation and uniform incorporation into the paint.

Latex emulsions

Add 0.01–0.05% Densil® DN Antimicrobial. Not for use in food contact paper coatings.

Aqueous dispersions

Add 0.01–0.05% Densil® DN Antimicrobial for preservation of dispersions, slurries, and thickeners including urethane dispersions, mineral or pigment slurries (such as clay, kaolin, calcium carbonate, and titanium dioxide). Not for use in food contact paper coatings.

Building materials

Add 0.075–0.115% Densil® DN Antimicrobial for preservation of adhesives, tape joint compounds, spackle, stucco, grout, glazing compounds, fillers, sealants, caulks, and weather stripping. Not for use in food contact adhesives.

Add 0.075–0.115% Densil® DN Antimicrobial for preservation of gypsum, perlite, plaster-like or mineral and cellulose materials.

Add 0.075–0.115% Densil® DN Antimicrobial for preservation of ceiling tiles, partitions, dry wall and wallboard.

Pulp and paper slurries

Add 0.01–0.05% Densil® DN Antimicrobial for preservation of pulp and paper slurries and for preservation of paper coating compositions, including starch preparations. Not for use in food contact paper products or paper coatings.

Manufactured paper

Add 0.075–0.115% Densil® DN Antimicrobial for preservation of manufactured paper and paperboard products such as insulation facing, wallboard facing, stationeries, and paper packaging. Not for use in food contact paper products.

Properties for Densil® DN Antimicrobial	
General	Densil® DN Antimicrobial is a concentrated high active content preparation
Physical Form	Liquid
Active Content	99% (approx.)
Viscosity (20°C)	90 centipoise (approx.)
Brookfield	LV Spindle #3 @12 RPM
Specific Gravity (25°C/25°C)	1.17 (approx.)
Density(25°C)	9.75 lb./gal. (approx.)
Solubility	Miscible in water at use dilutions.
Stability	Stable under all normal storage conditions. The active agent is heat stable and non-volatile. The Densil® DN Antimicrobial active agent is non-volatile and comprises approximately 99% of the preparation. It contains less than 0.5% water. There are no other volatile ingredients
VOC	

Technical Service

Technical service is available to facilitate further use of Lonza Antimicrobials. If you have a specific question, or need further information, please contact your Lonza account representative.

Densil® DN Antimicrobial is registered with the Environmental Protection Agency and has been granted EPA registration No. 1258-1249

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

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