

Microbial Control

Technical Data Sheet

DOWICIDE 25L Antimicrobial

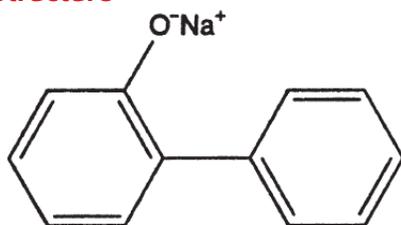
Preservative for Adhesives, Concrete Admixtures, Latex, Metalworking Fluids, Paint, Slurries and Dispersed Pigments

General

DOWICIDE* 25L Antimicrobial is a ready-to-use 25% aqueous solution of sodium orthophenylphenate (SOPP). DOWICIDE 25L Antimicrobial is a formaldehyde-free, readily biodegradable, fast-acting, broad spectrum bactericide and fungicide that is highly effective in high alkaline pH applications. Its excellent thermal stability makes it ideal when adding biocide to heated formulations above 100°C. It can be incorporated directly into the product being preserved or at the beginning of the formulation process. It can also be diluted further with water or water-miscible solvents prior to addition to a product. DOWICIDE 25L Antimicrobial is suitable as a preservative for raw materials and formulated products.

DOWICIDE 25L Antimicrobial is a ready-to-use product and can be incorporated with adequate mixing at any point during the manufacturing process. However, its unique properties (thermal stability) allow it to be added prior to complete cool down. DOWICIDE 25L Antimicrobial can therefore work to prevent the development of bioburden before most antimicrobials can be added to a slurry or pigment.

Structure



Physical Properties

The following are typical properties of DOWICIDE 25L Antimicrobial; **they are not to be considered product specifications.**

Molecular Formula (Active Ingredient)	$C_6H_4(C_6H_5) ONa$
Molecular Weight (Active Ingredient)	192.3
Specific Gravity, 25/25°C	1.1
pH	12.0-13.5

Note: Adding DOWICIDE 25L Antimicrobial to an aqueous-based product will increase the pH due to the presence of sodium hydroxide in DOWICIDE 25L.

Uses

Adhesives

To protect adhesives based on starch, protein, natural and synthetic gums and natural and synthetic rubber latex from deterioration during manufacture, storage and service life, add 0.1 to 3.0% by weight of DOWICIDE 25L Antimicrobial to the formulation.

Concrete Admixtures

To control the growth of fungi and bacteria in concrete admixtures, add 0.1-1.0% by weight of DOWICIDE 25L Antimicrobial during the manufacture of the admixture. DOWICIDE 25L Antimicrobial is especially suitable for products that typically reside at an alkaline pH. DuPont recommends adding DOWICIDE 25L Antimicrobial at the beginning of the formulation process for concrete admixtures. This allows the biocide to mix adequately and to begin working during the manufacture of the formulation.

Latex

To preserve synthetic and natural latex dispersions and emulsions in manufacture, transportation and storage, add 0.1 to 1.0% by weight of DOWICIDE 25L Antimicrobial to the dispersion or emulsion.

Metalworking Fluids

To control the growth of fungi and bacteria in metalworking fluids, add 1.0 to 2.5 gallons of DOWICIDE 25L Antimicrobial to 1000 gallons of diluted metalworking fluid. DOWICIDE 25L Antimicrobial may also be used in metalworking fluid concentrate at levels sufficient to yield 0.12 to 2.4% DOWICIDE 25L Antimicrobial in the fluid as diluted for use.

DuPont recommends adding DOWICIDE 25L Antimicrobial at the beginning of the formulation process for metalworking fluid concentrates. DOWICIDE 25L Antimicrobial can be manually added tankside to metalworking fluid systems as needed.

Paint

For preservation of decomposable raw material solutions or dispersions during paint manufacturing or storage, or for

shelf preservation of water-based paints, add 0.04 to 1.6% by weight of DOWICIDE 25L Antimicrobial at a suitable point in the manufacture or storage of the paint or paint raw material.

Slurries and Dispersed Pigments

To control growth of fungi and bacteria in aqueous-based slurries and dispersed pigments such as clay, kaolin, calcium carbonate, calcium sulfate, barium sulfate, magnesium silicate, iron oxide, carbon black, titanium dioxide, kieselguhr, starch, organic dyes and other filler suspensions, add 0.04-1.6% by weight of DOWICIDE 25L Antimicrobial at a suitable point during the manufacture, container loading/filling or shipment of the slurry. DuPont testing has shown DOWICIDE 25L Antimicrobial to be stable in high temperature environments often encountered in the manufacturing of mineral slurries.

Recommended use concentrations for DOWICIDE 25L Antimicrobial based on the Dupont Challenge Test

Product	Suggested Starting Level	Use Range
Slurries and Dispersed Pigments	0.04%	0.04 to 1.6%
Concrete Admixtures	0.10%	0.1 to 1.0%
Metalworking Fluids (Tankside)	0.2%	0.1 to 0.25%
Metalworking Fluids Concentrates	0.12%	0.12 to 2.4%†
Adhesives	0.10%	0.1 to 3.0%
Latex	0.24%	0.1 to 1.0%
Paint	0.24%	0.04 to 1.6%

†Percent by weight in fluid as diluted for use

Food Contact

Status of DOWICIDE 25L Antimicrobial Under Federal Laws E.P.A. Registration No. 464-656 DOWICIDE 25L Antimicrobial meets the requirements of the Food Additive Regulations administered by the U.S. Food and Drug Administration as follows:

- 21 CFR 175.105(c)(5) – Adhesives
- 21 CFR 175.300(b)(3)(xxxi) – Resinous and Polymeric Coatings: Can End Cements.

Toxicity

DOWICIDE 25L Antimicrobial is capable of producing severe eye irritation and corneal injury. A single short exposure may cause skin irritation. If product is heated or mist is produced, air concentrations may be attained that are sufficient to cause respiratory irritation.

Product Stewardship

When considering the use of any DuPont 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. DuPont 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 DuPont products – from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

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



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