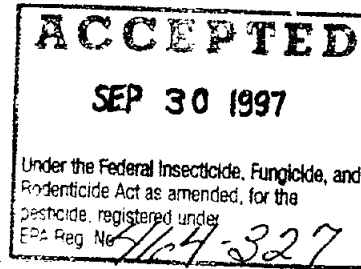


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DOWICIL 150 Antimicrobial  
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**DOWICIL\* 150 Antimicrobial**

For The Control of Bacteria and Fungi in Industrial Applications

**For Industrial Use Only**

Active Ingredients:

Cis-isomer of 1-(3-chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride . 94.0% **96.0%**

Inert Ingredients: .....:6.0% **4.0%**

E.P.A. Registration No. 464-327

E.P.A. Est. 464-CA-1<sup>(97)</sup>

Superscript raised corresponds to alpha/numeric lot number

**KEEP OUT OF REACH OF CHILDREN**

**WARNING**

**Precautionary Statements**

**Hazards to Humans and Domestic Animals**

**HARMFUL IF ABSORBED THROUGH SKIN • MAY BE HARMFUL IF SWALLOWED**

**Avoid Skin Contact • Avoid Contact With Skin, Eyes and Clothing • Chemical resistant gloves must be worn when handling • Wash Thoroughly With Soap and Water After Handling**

**Statements of Practical Treatment**

In case of skin contact, remove contaminated clothing and wash skin with plenty of water. Wash clothing before reuse. In case of eye contact, irrigate eyes with flowing water for 15 minutes. If irritation results, get medical attention. If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Call a physician. Do not induce vomiting or give anything by mouth to an unconscious person.

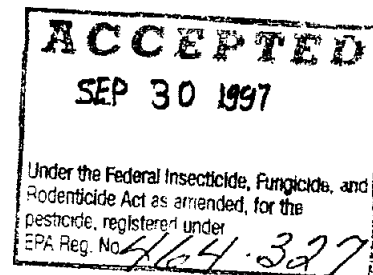
**Physical or Chemical Hazards**

**FLAMMABLE • Keep Away From Heat, Sparks, and Open Flame**

**Environmental Hazards**

This product is toxic to fish and invertebrates. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

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**IN CASE OF AN EMERGENCY**

endangering life or property involving this product, call collect 517-636-4400

**NOTICE**

Do Not Ship or Store with Food, Feeds, Drugs, or Clothing

**FOR USE IN MANUFACTURING PROCESSES**

**DIRECTIONS FOR USE**

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

DOWICIL 150 Antimicrobial, ~~when used according to good manufacturing practices~~ meets the requirements of Food Additive Regulations 21 CFR 175.105 for use as a preservative in adhesives; 21 CFR 177.1680 for preservation of polyurethane resins in contact with dry bulk foods; 21 CFR 176.170 for preservation of components of paper and paperboard intended for use in contact with aqueous and fatty foods; and 21 CFR 176.180 for preservation of components of paper and paperboard intended for use in contact with dry foods.

DOWICIL 150 Antimicrobial may be used as a preservative (inert ingredient) in water-based formulations which do not come in contact with food, food crops, feedstuffs, and water supplies, and which are not applied to humans or food producing animals, in concentrations not to exceed 0.14% by wt of the total formulation.

**DETERGENTS**

To prevent bacterial deterioration during storage and to increase the shelf life of biodegradable surfactants, add 0.03 - 0.1% DOWICIL 150 Antimicrobial by wt of the formulation. Add as an aqueous solution.

**FLOOR WAX EMULSIONS AND FLOOR POLISHES**

To preserve water-based waxes and polishes during storage, add 0.05 - 0.15% DOWICIL 150 Antimicrobial by wt of the formulation. Add as an aqueous solution.

**ADHESIVES**

To prevent pH drop, odor, gas formation, change in viscosity, and loss of adhesive strength during manufacture, storage and service, add 0.05 - 0.5% DOWICIL 150 Antimicrobial by wt to the formulation. Add as a concentrated aqueous solution.

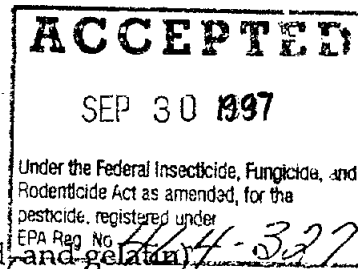
For use in the following types of adhesives:

**Starch Based (corn, tapioca, sago, potato, etc.)**

Add 0.1 - 0.2% DOWICIL 150 Antimicrobial by wt as a concentrated aqueous solution.

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**Protein-Derived** (animal glues such as hide, bone, fish, blood, and gelatin)  
Add 0.1 - 0.5% DOWICIL 150 Antimicrobial by wt as a concentrated aqueous solution.

**Natural Gums** (arabic, guar, and tragacanth)  
Add 0.05-0.2% DOWICIL 150 Antimicrobial by wt as a concentrated aqueous solution.  
Highly concentrated gums do not readily support bacterial or fungal growth: consequently, higher concentrations of DOWICIL 150 Antimicrobial are required in the less concentrated gum solutions.

**Natural Rubber Latex**  
Add 0.05 - 0.15% DOWICIL 150 Antimicrobial by wt as a concentrated aqueous solution.

**Polyvinyl Acetate Emulsions**  
Add 0.05 - 0.15% DOWICIL 150 Antimicrobial by wt as a concentrated aqueous solution.

**Synthetic Gums** (e.g., METHOCEL\* methylcellulose gums) and **Other Synthetic-Based Adhesives**  
Add 0.05 - 0.15%† DOWICIL 150 Antimicrobial by wt as a concentrated aqueous solution.

†Synthetic adhesive formulations sometimes incorporate natural substances such as starches or proteinaceous materials. To preserve these formulations, use the level of preservative recommended for the adhesive containing only the natural material.

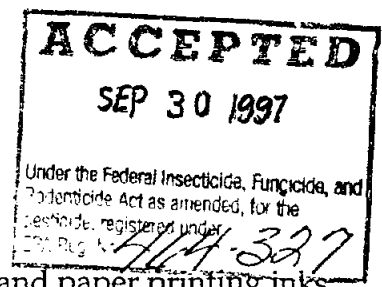
**NOTE: DOWICIL 150 ANTIMICROBIAL IS INCOMPATIBLE WITH CASEIN IN BOTH LIQUID AND DRY SYSTEMS, AND WITH SOME TYPES OF AMINE-MODIFIED CLAYS.**

**LAUNDRY STARCH**  
To increase shelf and use life of liquid formulations, add 0.05 - 0.15% DOWICIL 150 Antimicrobial by wt of the formulation. Add as an aqueous solution.

**CONSTRUCTION MATERIALS**  
To increase shelf and use life of caulking, grouting, spackling compounds, and joint cements, add 0.06 - 0.15% DOWICIL 150 Antimicrobial by wt of the formulation. Method of application depends on the type of formulation, and may be made dry or as a concentrated aqueous solution.

**NOTE: DOWICIL 150 ANTIMICROBIAL IS INCOMPATIBLE WITH CASEIN IN BOTH LIQUID AND DRY SYSTEMS, AND WITH SOME TYPES OF AMINE-MODIFIED CLAYS.**

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**INKS**

To increase the shelf life of water-based fountain pen, fabric, and paper printing inks, add 0.15 - 0.2% DOWICIL 150 Antimicrobial by wt of the ink. Add as an aqueous solution.

**LATEX EMULSIONS**

To prevent bacterial deterioration during manufacture, transit, and storage of raw emulsions, add 0.05 - 0.15% DOWICIL 150 Antimicrobial by wt of the total emulsion. Add as an aqueous solution.

**METALWORKING FLUIDS**

To control bacterial contamination that produces odors, rancidity, acidity, and destruction of soluble cutting oils, add 0.1 - 0.2% DOWICIL 150 Antimicrobial by wt of the formulation. Add to the water phase of the cutting fluid during formulation.

**PAINT**

To preserve cellulose-thickened latex paints in the can, add 0.05 - 0.2% DOWICIL 150 Antimicrobial by wt of the formulation. Add dry or as an aqueous solution during any phase of the formulating process in the aqueous-phase raw materials. DOWICIL 150 Antimicrobial has no effect on the viscosity, stability, and other physical properties of the paint formulation or on the colorfastness of the paint films.

**PULP AND PAPER**

To protect coatings, finishes, and printing colors based on starch and latex (natural and synthetic) from bacterial and fungal attack, add 0.1 - 0.2% DOWICIL 150 Antimicrobial by wt of the formulation. Add as an aqueous solution. These concentrations will protect against bacterial and fungal growth for 3-6 days. Longer periods of preservation require higher concentrations.

**TEXTILES**

To prevent spoilage of spinning emulsions for rayon and finishing solutions, and to prevent viscosity and pH changes in printing pastes caused by bacteria and fungi, add 0.1 - 0.2% DOWICIL 150 Antimicrobial by wt of the formulation. Add as an aqueous solution.

**STORAGE AND DISPOSAL**

**STORAGE**

If the entire contents of the drum are not used upon opening, reseal the polyethylene liner to keep moisture from caking the product. Water solutions of DOWICIL 150 Antimicrobial should be kept below 77°F (25°C).

**Note:** To avoid decomposition (which will release smoke and flammable vapors), store in a cool, dry place below 120°F (49°C). Do not store near flammable materials.

