Antimicrobial-treated Powder Coatings
DuPont™ Alesta® AM Antimicrobial-treated Powder Coatings

DuPont™ Alesta® AM is a patented powder coating, treated with silver ionic technology that is known to inhibit the growth of microbes on powder coated surfaces.

Features & Benefits
- Available in a variety of chemistries, including epoxy, hybrid and polyester (premium weathering and low cure formulations)
- Available in a full range of colors, textures and glosses
- Active ingredient is Environmental Protection Agency (EPA) - registered and US Food and Drug Administration (FDA) - compliant

Ideal Applications
- Hospitals, public transit, restaurants, park and playground structures, medical equipment, water treatment plants, food service packaging equipment, pharmaceutical labs, school and child-care facilities.

Important Notes
Some Alesta® AM powder coatings can be formulated to meet:
- FDA guidelines under the Federal Code of Regulations, Title 21, Section 175.300; Resinous and Polymeric Coatings
- NSF/ANSI Standard $1 for food equipment materials

Silver is registered as a pesticide with the EPA (EPA 736-F-93-005). The EPA states, “Pesticides are substances used to prevent, destroy, repel or mitigate any pest ranging from insects, animals and weeds to microorganisms such as fungi, molds, bacteria and viruses.” The EPA strictly regulates advertising claims and as such, no health claims can be made relating to antimicrobial activity.

Antimicrobial protection is limited to the treated article and does not protect against disease-causing bacteria. The use of these products does not protect users of any such treated article or others against food-borne or disease-causing bacteria, viruses, germs or other disease-causing organisms.

For more information about EPA regulations on antimicrobial additives in consumer products, visit: www.epa.gov/pesticides/factsheets/treatart.htm

Ordering Alesta® AM
There are 3 ways to buy Alesta® AM powder coatings.

1. **Stock Colors.** We offer two antimicrobial-treated powders from our stock product line:

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sky White AM</td>
<td>PFW669S8A</td>
</tr>
<tr>
<td>Crystal Clear AM</td>
<td>PFC609S9A</td>
</tr>
</tbody>
</table>

2. **DuPont™ Alesta® RALGuard.** Combine this additive to your Alesta® RAL products to incorporate antimicrobial properties.

3. **Custom formulations.** Talk to your local sales representative regarding custom formulations to fit your exact needs for antimicrobial powders.

Technical Information

Why silver-based antimicrobial additives for powder coatings?
Silver is a naturally occurring element proven effective at inhibiting the growth of many types of microbes. Historical data shows that silver exhibits very low toxicity for humans and animals. Silver is highly regarded for its antimicrobial properties and has many benefits over alcohol-, chlorine-, or ammonium-based antimicrobials.

How does it work?
Moisture causes a controlled release of silver ions embedded in the special silver-containing zeolite. Silver ion interferes with the cell membranes to inhibit respiration and growth.

Antimicrobial Efficacy within 24 Hours

Antimicrobial Performance After Wash Cycles

Important Notes

The use of bleach type cleaners on our antimicrobial treated coatings should be avoided due to the rapid depletion of the antimicrobial agent when exposed to these types of compounds. We recommend a mild detergent and water solution.

Antimicrobial Activity Data† of Alesta® AM White Polyester

† - Using modified JIS Z 2801:2000 Antimicrobial Products - Test for antimicrobial activity and efficacy (modified for improved testing variation)

‡ - W value as defined by USEPA (November 2005)

‡ - 1 cycle = 2 hours continuous agitation in 0.2% Ivory® Liquid Soap solution.

Antimicrobial Activity Data† of Alesta® AM White Polyester

* - Using modified JIS Z 2801:2000 Antimicrobial Products - Test for antimicrobial activity and efficacy (modified for improved testing variation)

† - ‘R’ value as defined by JIS Z 2801:2000

‡ - 1 cycle = 2 hours continuous agitation in 0.2% Ivory® Liquid Soap solution.

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### Table: Model Wash Solution and Model Exposure Solution

<table>
<thead>
<tr>
<th>Model Wash Solution</th>
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</thead>
<tbody>
<tr>
<td>Detergent</td>
<td>Synthetic Sweat</td>
</tr>
<tr>
<td>0.2% Ivory® Dish Soap</td>
<td>Diluted Nutrient broth</td>
</tr>
<tr>
<td>Lactic acid, urea and NaCl</td>
<td>Pathogens, beef extract</td>
</tr>
</tbody>
</table>

Thank you to Qilin Li, Michael Liga and Cong Yu - Department of Civil & Environmental Engineering, Rice University.

Rice University does not endorse or do testimonials for products or services.