3M™ Anti-Soiling (AS) Liquid 600
For Glass Surfaces in Solar Energy Generation Systems

Introduction
Glass surfaces in photovoltaic or thermal solar power systems accumulate soil on their sun-facing surface, which reduces light transmission or reflection and thus reduces power output.

Description
3M™ Anti-Soiling (AS) Liquid 600 is a water-based liquid that forms a hydrophilic coating on glass, providing resistance to dry-dust soiling. It is specifically designed for in-field application.

Features
- Designed for dry, dusty environments
- Water based
- Ambient temperature application
- Formulated to bond to bare glass

Typical Physical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent Solids</td>
<td>2.2%</td>
</tr>
<tr>
<td>pH</td>
<td>2.8-3.0</td>
</tr>
<tr>
<td>Shelf Life</td>
<td>6 months from date of manufacture</td>
</tr>
<tr>
<td>Coverage Rate</td>
<td>30 m²/L (1018 ft²/gal)</td>
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<tr>
<td>Predicted Product Lifetime</td>
<td>Up to 3 years in arid environments*</td>
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</tbody>
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* Based on accelerated weathering data.

Laboratory Testing

The photo shows the results of dust adhesion testing on a glass mirror panel tested in a controlled chamber at 70°F and 10% relative humidity. Excess ASTM Fine test dust was applied over the face of the panel which was coated on one section with Anti-Soiling Liquid 600. After gently tapping the panel in a vertical position, the coated section exhibits significantly less adhesion of dust particles than the uncoated section.

Storage Conditions

Protect from freezing. Best storage temperature is 60-80°F (15-27°C). Higher temperature reduces normal storage life. Rotate stock on a “first in, first out” basis.

Shelf Life

When stored at the recommended temperature in the original, unopened container, these products have a shelf life of 6 months from the date of manufacture. Do not use if liquid appears to have thickened or formed a gel, or if solids are visually present in the container, especially at the bottom of the container.
Application Instructions

Notes:
- Product is designed for application to bare glass. Applications to glass with coatings or other treatments may affect product performance and lifetime.
- Product is designed for application to glass at surface temperatures between 40-90°F (4-32°C). Performance of the product can be significantly reduced when applied to surfaces outside this temperature range. Note that when photovoltaic panels are exposed to sunlight, the temperature of the glass is typically much higher than the ambient air temperature. As such, it is highly recommended that the product be applied in low light conditions (e.g., at night, in the early morning, or in the late evening).

A. Clean Glass Surface
- Rinse the glass surface with deionized (DI) water to wet.
- Wipe the entire surface with a lint-free cloth.
- Remove stuck-on debris with flat razor blade or other suitable device.

B. Rinse Glass Surface
- Rinse the glass surface with DI water.
- Squeegee off excess water.
- Wipe off any water around the edges with a clean cotton cloth.

C. Apply 3M™ Anti-Soiling Liquid 600
- Immerse paint roller in the coating fluid to assure full wet-out.
- Roll on coating solution. Work from bottom edge to top edge, left to right or vice versa.
- Optional: To assure complete coverage, make two passes of the roller. Avoid additional passes.
- Wait 30 seconds after the coating is applied to squeegee off the excess coating.
- Work from top edge to bottom edge, left to right (same as roller application).
- Squeegee off the excess coating before it dries. If needed, excess coating can be captured in a drain pan.
- If necessary, wipe off any drops along the edges or streaks on the face with a clean cotton cloth.

Required Equipment
- Two gallon or larger plastic hand-held sprayer (e.g., Hudson® Sprayer) -for water only
- Lint-free cleaning cloths (e.g., Texwipe® Wiper)
- Cotton cleaning cloths
- Flat razor blades with holder
- Squeegee (e.g., Sorbo® Squeegee 3 × 4½”)
- Paint roller: 1/4 – 3/8” nap, smooth, shed resistant, 9 – 12” wide
- Paint roller tray, 9 – 12” wide
- Extension pole – optional
- Drain pan – optional

Precautionary Information

Refer to Material Safety Data Sheet for health and safety information before using this product. For additional health and safety information, visit www.3M.com/msds or call 1-800-364-3577 or (651) 737-6501.

For more information on our solar manufacturing product line, contact 3M Renewable Energy at 800-755-2654 or visit us at www.3M.com/solar.

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