Aeroglaze® Z306 Polyurethane Coating

Description
Aeroglaze® Z306 coating is an absorptive poly-urethane coating designed for application on substrates used in aerospace operations. These operations include those where coatings must exhibit low outgassing characteristics while providing high thermal absorptivity properties. Aeroglaze Z306 coating cures to a flat black finish.

Features and Benefits
Low Outgassing – exhibits low gassing properties in high vacuum environments.

Durable – provides mechanical properties required for rigorous durations in space; provides excellent performance on rigid or flexible substrates.

High Thermal Absorptivity – provides thermal absorptivity for applications where superior heat absorption is required.

Application
Surface Preparation – Thoroughly clean surfaces to remove all dust, oil and grease. For most substrates, apply primer to ensure proper adhesion and performance of the coating. Contact your SOCOMORE representative for recommended Aeroglaze primer required for your application.

Typical Properties*

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td>Appearance</td>
<td>Black Liquid</td>
</tr>
<tr>
<td>Viscosity, cps @ 25°C (77°F)</td>
<td>50-250</td>
</tr>
<tr>
<td>Density</td>
<td>0.92-0.97 (7.7-8.1)</td>
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<tr>
<td>Solids Content by Weight, %</td>
<td>26-29</td>
</tr>
<tr>
<td>Flash Point (Seta), °C (°F)</td>
<td>19 (67)</td>
</tr>
<tr>
<td>Volatile Organic Content (VOC)</td>
<td>677 (5.65)</td>
</tr>
<tr>
<td>Outgassing**</td>
<td>1.0</td>
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<tr>
<td>Collected Volatile Condensable Materials (CVCM), %</td>
<td>0.02</td>
</tr>
<tr>
<td>Gloss @ 85°</td>
<td>15 maximum</td>
</tr>
</tbody>
</table>

*Data is typical and not to be used for specification purposes.
** 40 day cure at room temperature.
**Mixing** – Before opening container, thoroughly mix coating using a paint shaker for 5 minutes. Open the lid carefully as the container may be under slight pressure. Stir coating with a clean paint stick to check for any settled material and ensure mixture is homogeneous. If material has settled, return closed container to the paint shaker and shake an additional 5 minutes or until no settling is apparent.

Dilute coating with 15-20% Aeroglaze 9958 thinner, by volume, to a Zahn Cup #2 viscosity of 18-22 seconds.

**Applying** – Apply coating by HVLP or airless spray equipment. Aeroglaze Z306 coating is best applied at 13-35°C (55-95°F), with substrate temperatures at least 2.8°C (5°F) above the dew point.

Apply Aeroglaze Z306 coating at a maximum thickness of 25 dry micron or 100 wet micron (1 dry mil or 4 wet mil) per coat. Typical dry film thickness of Aeroglaze Z306 coating should be approximately 38.1-50.8 micron (1.5-2.0 mil).

Hold the gun at right angles to the surface, approximately 20.3-30.5 cm (8-12 in) away, and apply with a 50% overlap. A light mist coat should be applied, followed by a full wet coat of 76.2-101.6 wet micron (3-4 wet mil). Coverage rate is 9.3 m²/L (368 ft²/gal).

**Curing** – Aeroglaze Z306 coating cures by reacting with moisture in the air. Cure rate is dependent on the temperature, relative humidity and amount of air circulation needed to remove the solvent.

Under the acceptable curing conditions (see Temperature/Relative Humidity Graph), the coating will develop its ultimate properties in approximately 7 days. Lower temperatures and humidities will retard cure, while higher temperatures and humidities may cause bubbling.

Aeroglaze Z306 coating cures to a tack-free surface in 2-3 hours at 25°C (77°F) and 50% relative humidity. Room temperature cure times of 12 hours permit handling; 36-48 hours permit normal usage.

Aeroglaze Z306 coating may be recoated after the first application within 3 hours minimum and 24 hours maximum. Recoat time is dependent on temperature and humidity. High temperature and humidity promote fast cure while low temperature and humidity slow down the cure. In high temperature and high humidity conditions, recoat within 8 hours to prevent intercoat adhesion failure.

If the maximum recoat time is exceeded, the surface must be roughened by sanding with fine sandpaper before recoating.

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**Temperature/Relative Humidity Graph**

![Temperature/Relative Humidity Graph](image)
**Cleanup** – Use Aeroglaze 9958 thinner to clean equipment. Do not use lacquer thinners, water or solvents containing alcohols.

**Shelf Life/Storage**
Shelf life is one year from date of shipment when stored in original, unopened container. Store indoors away from heat, sparks and open flames. To maintain product freshness, keep container closed when not in use and nitrogen purge after opening if possible.

**Cautionary Information**
Before using this or any SOCOMORE product, refer to the Safety Data Sheet (SDS) and label for safe use and handling instructions.

*For industrial/commercial use only.* Must be applied by trained personnel only. Not to be used in household applications. Not for consumer use.

**Limitations**
- Not for immersion service. Do not apply to wet or damp substrates.
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Values stated in this technical data sheet represent typical values as not all tests are run on each lot of material produced. For formalized product specifications for specific product end uses, contact SOCOMORE.

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