HardTop
Coating System

General Polymers HardTop Coating System combines a unique aliphatic polyurethane resin and a durable powdered aggregate to provide an abrasion resistant seal coat that extends the life expectancy of a standard urethane topcoat. HardTop is specially formulated to resist wear patterns in high traffic areas, while maintaining chemical and color (UV) stability.

Advantages
- UV stable
- High solids
- Acceptable for use in USDA inspected facilities
- Excellent chemical resistance
- Abrasion resistant
- High gloss
- Resistant to Betadine staining
- Scuff resistant
- Clear or pigmented

Uses
- Healthcare facilities
- Animal holding
- Laboratories
- Clean rooms
- Rest rooms
- Change rooms
- Corridors
- Production floors

Limitations
- Do NOT premix Part B hardener
- Humidity must not exceed 80%

Typical Physical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Standard Colors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td></td>
</tr>
<tr>
<td>Solids, by volume</td>
<td>94% ±2%</td>
</tr>
<tr>
<td>Cure Time</td>
<td></td>
</tr>
<tr>
<td>Dry to touch</td>
<td>12 hours</td>
</tr>
<tr>
<td>Recoat</td>
<td>15 hours</td>
</tr>
<tr>
<td>Foot Traffic</td>
<td>18-24 hours</td>
</tr>
<tr>
<td>Wheeled Traffic</td>
<td>2 days minimum</td>
</tr>
<tr>
<td>Full Cure</td>
<td>3 days</td>
</tr>
<tr>
<td>Abrasion Resistance</td>
<td>30 mgs lost</td>
</tr>
<tr>
<td>ASTM D 4060, CS-17 Wheel, 1,000 cycles</td>
<td></td>
</tr>
<tr>
<td>Adhesion</td>
<td>350 psi</td>
</tr>
<tr>
<td>ACI 503R</td>
<td>100% concrete failure</td>
</tr>
<tr>
<td>Elongation</td>
<td>25.4%</td>
</tr>
<tr>
<td>ASTM D 638</td>
<td></td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>3,217 psi</td>
</tr>
</tbody>
</table>

ASTM D = Resin only
Installation

The following information is to be used as a guideline for the installation of the HardTop Coating System. Contact the Technical Service Department for assistance prior to application.

Surface Preparation - General

General Polymers systems can be applied to a variety of substrates, if the substrate is properly prepared. Preparation of surfaces other than concrete will depend on the type of substrate, such as wood, concrete block, quarry tile, etc. Should there be any questions regarding a specific substrate or condition, please contact the Technical Service Department prior to starting the project. Refer to Surface Preparation (Form G-1).

Surface Preparation - Concrete

Concrete surfaces shall be abrasive blasted to remove all surface contaminants and laitance. The prepared concrete shall have a surface profile equal to CSP 1-3. Refer to Form G-1. Consult the Technical Service Department if oil or grease is present.

Temperature

Throughout the application process, substrate temperature should be 40°F minimum. Substrate temperature must be at least 5°F above the dew point. Applications on concrete substrates should occur while temperature is falling to lessen offgassing.

Application Information — Surface Prep Profile CSP 1-3

<table>
<thead>
<tr>
<th>VOC MIXED</th>
<th>MATERIAL</th>
<th>MIX RATIO</th>
<th>THEORETICAL COVERAGE PER COAT CONCRETE</th>
<th>PACKAGING</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Seal Coat Pigmented</td>
<td>4687</td>
<td>2:1</td>
<td>500 sq ft / gal (minimum)</td>
</tr>
<tr>
<td>0</td>
<td>Seal Coat Pigmented</td>
<td>5240</td>
<td>2:4 lbs* / gal</td>
<td></td>
</tr>
<tr>
<td>&lt;50 g/L</td>
<td>Optional Fill Coat</td>
<td>3579</td>
<td>2:1</td>
<td>105-200 sq ft / gal</td>
</tr>
<tr>
<td>&lt;50 g/L</td>
<td>Primer</td>
<td>3579</td>
<td>2:1</td>
<td>200-250 sq ft / gal</td>
</tr>
</tbody>
</table>

* NOTE: A heavier loading of aluminum oxide further reduces gloss

Different seal coat(s) — Consult individual Technical Data Sheets for mixing and application instructions.

4686 Ultra High Solids Aliphatic Urethane (Clear) Mixing ratio is 1:1.
Primer

Mixing and Application

1. Premix 3579A (resin) using a low speed drill and Jiffy blade. Mix for one minute and until uniform, exercising caution not to introduce air into the material.

2. Add 2 parts 3579A (resin) to 1 part 3579B (hardener) by volume. Mix with low speed drill and Jiffy blade for three minutes and until uniform. To insure proper system cure and performance, strictly follow mix ratio recommendations.

3. 3579 may be applied via spray, roller or brush. Apply 6-8 mils, evenly, with no puddles. Coverage will vary depending upon porosity of the substrate and surface texture.

4. Allow to cure a minimum of 8 hours.

Optional Fill Coat

Mixing and Application

1. Premix 3579A (resin) using a low speed drill and Jiffy blade. Mix for one minute and until uniform, exercising caution not to introduce air into the material.

2. Add 2 parts 3579A (resin) to 1 part 3579B (hardener) by volume. Mix with low speed drill and Jiffy mixer for three minutes and until uniform.

3. Apply material using a 1/4” v-notched trowel or 1/4” v-notched squeegee and back roll with a lopped roller at a spread rate of 105-200 sq. ft. per gallon to yield 8-15 mils WFT.

4. Allow to cure. (Cure times vary depending on environmental conditions).

Seal Coat Pigmented

Mixing and Application

1. Premix 4687A (resin) using a low speed drill and Jiffy blade. Mix for one minute and until uniform, exercising caution not to introduce air into the material.

2. Add 2 parts 4687A (resin) to 1 part 4687B (hardener) by volume. Mix with low speed drill and Jiffy mixer for three minutes and until uniform. While mixing add 2-4 lbs per gallon 5240 Part C and mix for additional 30 seconds. Pour into an application tray.

3. Apply 4687 using a 1/4” nap roller at a spread rate of 500 square feet per gallon minimum, evenly, with no puddles making sure of uniform coverage. Take care not to puddle materials and insure even coverage.

4. Apply dipping and rolling out of the application tray as evenly as possible while strictly adhering to the coverage rate. Using a 9” roller will help maintain a consistent application thickness over normal waves and inconsistencies in the concrete.

5. Cross-roll the material in multiple directions to level out any roller marks until appearance is satisfactory.

6. Remix the material (using the roller) every time roller is dipped in the applicator tray to prevent settling of the 5240 Part C.

7. A second application may be applied within 15-24 hours.

Note: Applying material thicker than the published coverage will result in a higher gloss and loss of texture.

Different seal coat(s) — Consult individual Technical Data Sheets for mixing and application instructions.

4686 Ultra High Solids Aliphatic Urethane (Clear)

Cleanup

Clean up mixing and application equipment immediately after use. Use toluene or xylene. Observe all fire and health precautions when handling or storing solvents.

Safety

Refer to the MSDS sheet before use. Federal, state, local and particular plant safety guidelines must be followed during the handling and installation and cure of these materials. Safe and proper disposal of excess materials shall be done in accordance with applicable federal, state, and local codes.

Material Storage

Store materials in a temperature controlled environment (50ºF–90ºF) and out of direct sunlight. Keep resins, hardeners, and solvents separated from each other and away from sources of ignition.

Maintenance

Occasional inspection of the installed material and spot repair can prolong system life. For specific information, contact the Technical Service Department.

Shipping

- Destinations East of the Rocky Mountains are shipped F.O.B. Cincinnati, Ohio.
- Destinations West of the Rocky Mountains are shipped F.O.B. Victorville, California.

For specific information relating to international shipments, contact your local sales representative.
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