ARMORSEAL® 650 SL/RC
SELF-LEVELING/RECOATABLE EPOXY

Product Description

ARMORSEAL 650 SL/RC self-leveling, recoatable epoxy is a two-component, heavy duty floor system that provides a high gloss, seamless, hygienic surface that is extremely hard wearing and durable. The coating can also be applied to provide a nonslip texture. This product may be topcoated if required.

- Chemical resistant
- Impact resistant
- Abrasion resistant
- Outstanding application properties

Product Characteristics

Finish: Full Gloss
Color: Clear, Haze Gray, Deck Gray, White, Sandstone, Tile Red, and wide range of colors possible
Volume Solids: 99%, mixed
Weight Solids: 99%, mixed
VOC (EPA Method): <100 g/L; 0.83 lb/gal, mixed
Mix Ratio: 2 component, premeasured

Recommended Spreading Rate per coat:

<table>
<thead>
<tr>
<th>Wet mils (microns)</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.0 (250)</td>
<td>10.0</td>
<td>30.0*</td>
</tr>
<tr>
<td>(750)</td>
<td>(750)</td>
<td>(750)</td>
</tr>
</tbody>
</table>

Flash Point: 200°F (93°C), PMCC, mixed
Reducer: Not recommended
Clean Up: Reducer #54, R7K54

Dry mils

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Test Method</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrasion Resistance</td>
<td>ASTM D4060, CS17 wheel, 1000 cycles, 1 Kg load</td>
<td>100 mg loss</td>
</tr>
<tr>
<td>Flexural Strength</td>
<td>ASTM D790</td>
<td>~12,400 psi</td>
</tr>
<tr>
<td>Hardness - Shore D</td>
<td>ASTM D2240</td>
<td>75</td>
</tr>
<tr>
<td>Impact Resistance</td>
<td>Mil-D-3134J</td>
<td>Direct: &gt;160 lb; Indirect: &gt; 80 lb</td>
</tr>
<tr>
<td>Nuclear Decontamination*</td>
<td>ASTM D4256 / ANSI N 5.12</td>
<td>99.7% Water Wash; 98% Overall</td>
</tr>
<tr>
<td>Radiation Tolerance*</td>
<td>ASTM D4082 / ANSI 5.12</td>
<td>Pass at 30 mils (750 microns)</td>
</tr>
<tr>
<td>Surface Burning**</td>
<td>ASTM E84/ NFPA 255</td>
<td>Flame Spread Index 20; Smoke Development Index 35</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>ASTM D638</td>
<td>~6,000 psi</td>
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**Revised: November 4, 2019

Product Information

8.25

Recommended Uses

- Especially suited for clean rooms, aircraft hangars, laboratories, workshops and light assembly areas.
- The product can be applied at thicknesses from 10.0-30.0 mils (250-750 microns) dft.
- For use as part of the ArmorQuartz system, a decorative broadcast color quartz system.
- Suitable for use in USDA inspected facilities
- Nuclear Power Plants
- Nuclear fabrication shops
- DOE Nuclear Fuel Facilities
- DOE Nuclear Weapons Facilities
- This product meets specific design requirements for non-safety related nuclear plant applications in Level II, III and Balance of Plant, and DOE nuclear facilities*.

* Nuclear qualifications are NRC license specific to the facility.

Performance Characteristics

- Excellent adhesion properties
- Chemical resistant
- Self-leveling properties
- Provides a seamless-high build durable coating
- Solvent resistant
- Dry heat resistance: 200°F (93°C)

Test Name               | Test Method                  | Results |
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*Substrate: Concrete

**Armorseal WB Primer (Clear) at 2.5 mils (63 microns) DFT topcoated with ArmorSeal 650 SL/RC at 17.5 mils (438 microns) DFT

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continued on back
**Product Information**

**Surface Preparation**

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion. Refer to the product application bulletin for detailed surface preparation information.

Minimum recommended surface preparation:
- **Iron & Steel**: SSPC-SP6/NACE 3
- **Concrete & Masonry**: SSPC-SP13/NACE 6 or ICRI No. 310.2R, CSP 1-3
- **Primer required**

**Surface Preparation Standards**

<table>
<thead>
<tr>
<th>Condition of Surface</th>
<th>ISO 8501-1</th>
<th>Swedish Std.</th>
<th>SSPC NACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Metal</td>
<td>Sa 3</td>
<td>Sa 3</td>
<td>SP 5</td>
</tr>
<tr>
<td>Near White Metal</td>
<td>Sa 2.5</td>
<td>Sa 2.5</td>
<td>SP 10</td>
</tr>
<tr>
<td>Commercial Blast</td>
<td>Sa 2</td>
<td>Sa 2</td>
<td>SP 6</td>
</tr>
<tr>
<td>Brush-Off Blast</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Hand Tool Cleaning</td>
<td>C St 2</td>
<td>C St 2</td>
<td>SP 2</td>
</tr>
<tr>
<td>corroded</td>
<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Power Tool Cleaning</td>
<td>D St 3</td>
<td>D St 3</td>
<td>SP 3</td>
</tr>
<tr>
<td>Pitted &amp; Rusted</td>
<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Clear, broadcast</td>
<td>D St 3</td>
<td>D St 3</td>
<td>SP 3</td>
</tr>
<tr>
<td>Clear, coated</td>
<td>D St 3</td>
<td>D St 3</td>
<td>SP 3</td>
</tr>
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<td>SP 3</td>
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**Tinting**

Tinting acceptable for the tint bases only. Use Maxitoner colorants only at 50% tint strength. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color. No more than 6 oz. of Maxitoner colorant for the Ultra Deep Base and no more than 2 oz. of Maxitoner colorant for the White Base.

**Application Conditions**

Temperature: 55°F (13°C) minimum, 95°F (35°C) maximum
Relative humidity: 85% maximum
Refer to the product application bulletin for detailed application information.

**Ordering Information**

Packaging:
- 1 gallon (3.78L) kit contains Part A and Part B
- 5 gallon (18.9L) mix contains Part A and Part B
  Part A - 3.33 gal. (12.6L) in a 5 gal. container
  Part B - 1.67 gal. (6.3L) in a 2 gal. container

Weight: 10.4 ± 0.2 lb/gal; 1.25 Kg/L, mixed

**Safety Precautions**

Refer to the SDS sheet before use. Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

**Warranty**

The Sherwin-Williams Company warrants its products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

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**Surface Preparations**

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

**Concrete and Masonry**

For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 1-3. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement and hardeners. Fill bug holes, air pockets, and other voids with Steel-Seam FT910. Primer required.

**Follow the standard methods listed below when applicable:**
ASTM D4258 Standard Practice for Cleaning Concrete.
ASTM D4259 Standard Practice for Abrading Concrete.
ASTM D4260 Standard Practice for Etching Concrete.
ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete.
SSPC-SP 13/Nace 6 Surface Preparation of Concrete.
ICRI No. 310.2R Concrete Surface Preparation.

**Iron & Steel**

Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Commercial Blast Cleaning per SSPC-SP6/NACE 3. For better performance, use Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Prime any bare steel the same day as it is cleaned.

**Previously Painted Surfaces:**

If in sound condition, clean the surface of all foreign material. Smooth, hard or glossy coatings and surfaces should be dulled by abrading the surface. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, additional abrasion of the surface and/or removal of the previous coating may be necessary. Retest surface for adhesion. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above.

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<td></td>
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**Application Conditions**

- Temperature: 55°F (13°C) minimum, 95°F (35°C) maximum (air, surface, and material)
- At least 5°F (2.8°C) above dew point
- Relative humidity: 85% maximum

**Application Equipment**

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

- Reducer ................................Not recommended
- Clean Up .................................Reducer #54, R7K54
- Roller .................................Cover .........................3/8" woven with solvent resistant core
- Trowel ..................................Acceptable
- Squeegee .................................Acceptable
- Spike Roller/ Loop Roller .................Required

If specific application equipment is not listed above, equivalent equipment may be substituted.
ARMORSEAL ® 650 SL/RC
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**APPLICATION PROCEDURES**

Surface preparation must be completed as indicated.

To mix 1 gallon (3.78L) units: Use electric or air mixer (approximately 250 rpm) with mixing blade (Jiffy Model HS or equal). Premix both components for 1-2 minutes, then pour hardener contents into slack-filled resin can. Mix for 2 to 3 minutes, moving blade around can while mixing. Avoid whipping in air while mixing. To mix 5 gallon (18.9L) units use same procedure as mixing 1 gallon (3.78L) units except a larger blade (Jiffy Model ES or equal) is required.

Immediately pour entire mixture onto prepared substrate and spread with a flat rubber squeegee to the desired thickness and "cross-roll" using a 3/8" nap soft woven roller or equivalent. Check film thickness frequently. After 20-30 minutes setup time, material should be rolled with a spiked roller to remove any entrapped air. Do not spike roll after 40 minutes.

If a slip-resistant texture is desired, broadcast a clear, dry 30-50 mesh silica film thickness frequently. After 20-30 minutes setup time, material should be rolled with a spiked roller to remove any entrapped air. Do not spike roll after 40 minutes. An additional 20-30 minutes is recommended before the first broadcast is applied. In grass seed-like fashion, allow the granules to fall after being thrown upward and out. Continue broadcasting to excess until the floor appears completely dry. After 48 hours, sweep off excess granules with a clean, stiff-bristled broom. Clean granules can be saved for future use. All imperfections, such as high spots, should be smoothed before the application of the second broadcast.

**RECOMMENDED SPREADING RATES**

<table>
<thead>
<tr>
<th>Product</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>ArmorSeal 650 SL/RC</td>
<td>72 hours</td>
<td>72 hours</td>
</tr>
<tr>
<td>ArmorSeal 33 Epoxy Primer/Sealer Clear</td>
<td>24 hours</td>
<td>24 hours</td>
</tr>
</tbody>
</table>

**SPREADING RATES**

Spreading rates are calculated on volume solids and do not include an applica-
tion factor due to surface roughness, porosity of the substrate, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, etc.

**APPLICATION BULLETIN**

**PERFORMANCE TIPS**

Spreading rates are calculated on volume solids and do not include an applica-
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**APPLICATION BULLETIN**

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**COATINGS**

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**DISCLAIMER**

Clean spills and splatters immediately with Reducer #54, R7K54. Clean tools immediately after use with Reducer #54, R7K54. Follow manufacturer's safety recommendations when using any solvent.

**CLEAN UP INSTRUCTIONS**

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

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