**Protect VE-CR**

**Vinyl Ester Primer/Saturant/Broadcast System**

**DESCRIPTION:**
Protect VE-CR is a catalyzed, novolac vinyl ester resin for heavy-duty duty protection of concrete and steel substrates. It is a highly chemical resistant resin that provides excellent resistance to diluted acids, moderate alkalis, and a broad range of chemicals.

**Typical uses**
- Broadcast and fiberglass reinforced flooring, wall, and secondary containment systems.

**Advantages**
- Excellent chemical resistance
- Excellent bonding and adhesion characteristics
- Long service life

**Chemical Resistance**
In addition to strong chemicals, this system is best suited for resistant to diluted acids, and moderate alkalis. For best solvent resistance, Protect VE-SR is recommended. Specific information on the chemical resistance properties will be furnished on request.

**Surface Preparation**
**Metal** - For immersion or intermittent splash and spillage conditions, abrasive blast to “White Metal” in accordance with Steel Structures Painting Council Specifications SP-5 or NACE Specification #1. For fumes and dry environments, abrasive blast surface to “Near White” in accordance with SP-10 or NACE #2. A minimum surface profile of 3.0 mils is required.

**Concrete:**
Abraive blasting or scarification to remove laitance and surface contaminants is recommended. Concrete must be thoroughly cured and dry, free of dust, oil, curing solutions and mold release agents at time of application. Use ASTM D 4263 (plastic sheet test method) to ensure concrete is moisture free. If moisture is detected, re-test until dry.

**Application**
Mechanically mix Protect VE-CR resin (i.e. Part A) individually prior to adding hardener. If field tinting with Protect CPU colorpack, add 1 pint per 4 gallons and pre-mix until color is uniform in the pail. Next, add Protect VE-B hardener and mix one to two minutes. Primed surface must be dry and free of foreign matter at time of applying lining, coating or flooring application.

**Thinner**—None required. DO NOT THIN.

**Mixing Ratio - By Volume**
- Protect VE-CR-A Resin: 1 gal
- Protect VE-B Hardener: 2-3 oz. (kit shipped w/ 2.0 oz. per gal.)
- Protect CPU Colorpack: 4 oz/gal (optional, supplied in pint can)
- Protect VE-Curing Aid: 2-3 fl. Oz. (Final Coat ONLY)

**Handling Properties**

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Working Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>50°F (10°C)</td>
<td>45 min</td>
</tr>
<tr>
<td>70°F (21°C)</td>
<td>25 min</td>
</tr>
<tr>
<td>90°F (32°C)</td>
<td>12 min</td>
</tr>
</tbody>
</table>

**VE-CURING AID FOR FINAL TOPCOAT**
Depending on cure temperature and atmospheric conditions, the resin surface could remain tacky after final cure. This phenomenon at the very top of the film surface is caused by air inhibition. To eliminate this possibility, on the final wear or topcoat, Protective Industrial Polymers strongly recommends the addition of 2.0 to 3.0 oz./Gal of VE-Curing Aid additive. ADD TO FINAL COAT ONLY.

**Time to Recoat**

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Minimum Time</th>
<th>Maximum Time (When not in direct sunlight)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50°F (10°C)</td>
<td>6 hrs</td>
<td>2 weeks</td>
</tr>
<tr>
<td>70°F (21°C)</td>
<td>3 hrs</td>
<td>1 week</td>
</tr>
<tr>
<td>90°F (32°C)</td>
<td>2 hr</td>
<td>72 hours</td>
</tr>
</tbody>
</table>

**Coverage**
Concrete* varies with system used
Steel varies with system used

**Packaging**
The following standard packages are available
- Protect VE-CR: 4 gal units
- 50 Gal Drum

**Color and Pigmenting**
Protect VE-CR is available pre-pigmented in #124 Medium Gray and #332 Brick Red in 55 gallon drums.
Protect VE-CR is available in clear 4 gallon units. An optional pint can of Protect CPU colorpack may be purchased for in field tinting of these units.
Custom colors will be considered depending on volume required. Please contact Protective Industrial Polymers for specific details if this is required.

**Storage and Shelf Life**
Store material in a cool, dry and covered location (50°-90°F [10°-32°C]), away from fire hazards and direct sunlight. Shelf life is from date of manufacture (DOM).
- @ 40-60°F (4-16°C): 4 months
- @ 61-85°F (18-29°C): 3 months
- @ 86°F (30°C): 2 months

Higher temperature will shorten the shelf life of these products. The packing drums are to be kept tightly sealed and are to be resealed each time materials have been removed. All liquid products are to be stored in a frost-free place.

**Safety**
Protect VE-CR contains vinyl ester resins and cumene peroxide catalyst. The product’s components have been formulated to optimize physical characteristics such as strength and chemical resistance while minimizing hazardous physical and health factors encountered during application. A concerted effort is made to be aware of the latest chemical toxicological information and to apply this knowledge in a responsible manner to ensure product safety. Please wear respirator when necessary.

During application of Protect VE-Systems, always wear gloves and appropriate work clothing to minimize contact. Ventilation is required with special consideration for enclosed or confined areas. Air movement must be designed to insure turnover at all locations in work area and adjacent areas to avoid buildup of heavy vapors. Use caution when handling flammable liquids, eliminate sources of ignition from...
Technical Data Sheet

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work area and containers with residues. Observe safe storage practices by separating resins from hardeners, by keeping solvents in a cool area, free of sources of ignition. Product Material Safety Data Sheets are available and should be consulted when handling products. These products are for industrial and professional use only; application directions must be followed.

Maintenance

Periodically inspect the applied material and repair localized areas as needed. Consult your Protective Industrial Polymers representative for additional information.

Technical and Physical Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Test standard</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC</td>
<td>EPA Method 24</td>
<td>lb/gal</td>
<td>2.0</td>
</tr>
<tr>
<td>Adhesion (Concrete)</td>
<td>ASTM D4541</td>
<td>psi</td>
<td>&gt;300</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
<td>cps</td>
<td>400-600</td>
</tr>
<tr>
<td>Solids content</td>
<td>Theoretical Calculation</td>
<td>%</td>
<td>100 (reactive)</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Pensky Martens Closed Cup</td>
<td>°F (°C)</td>
<td>&gt;83 (28)</td>
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TECHNICAL SUPPORT: For application questions, please contact your salesman or PIP technical service at 440-243-4560. After business hours, please contact 1-800-974-1323.

READ SAFETY DATA SHEET (SDS) FOR SAFETY AND PRECAUTIONS. KEEP OUT OF REACH OF CHILDREN.

WARRANTY AND CONDITIONS OF USAGE

WARRANTY AND LIMITATION OF LIABILITY: Protective Industrial Polymers Inc. ("PIP") warrants that its products shall conform to the manufacturer’s written specifications and shall be free from defects for one (1) year from the date of purchase. PIP MAKES NO WARRANTIES, IMPLIED OR OTHERWISE, AS TO THE MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSES OF ITS PRODUCTS AND EXCLUDES AND DISCLAIMS THE SAME, INCLUDING, WITHOUT LIMITATION, FAILURE OF THE PRODUCT DUE TO ACTS OF GOD, FLOODING, EXTREME OR ABNORMAL TEMPERATURES, HUMIDITY AND MOISTURE, STRUCTURAL CONDITIONS, SITE PREPARATION AND CONDITIONS, ACCIDENTS, DAMAGE CAUSED BY INSTALLATION OF MACHINERY, EQUIPMENT OR FIXTURES WITHOUT ADEQUATE FLOOR PROTECTION OR WITHOUT ADEQUATE TIME FOR CURING, FAILURE TO COMPLY WITH CONDITIONS OF USAGE (SPECIFIED BELOW), VANDALISM, NEGLIGENT OR INTENTIONAL ACTS OF THIRD PARTIES OR OTHER CASUALTIES. If any PIP product fails to conform to this warranty, PIP shall either replace the product at no cost to Buyer or refund the cost of the product, in PIP's sole discretion. Replacement of any product or a refund of the cost of any product shall be the sole and exclusive remedy available to Buyer, and Buyer shall have no claim for incidental, special or consequential damages, including, without limitation, business interruption damages. Any warranty claim must be made within one (1) year from the date of delivery of products. PIP does not authorize anyone on its behalf to make any written or oral statements which in any way alter PIP’s warranty or installation and storage information or instructions in its product literature or on its packaging label. Any installation of PIP products which fails to conform to such installation information or instructions or the “Conditions of Usage” (specified below) shall void this warranty. Product demonstrations, if any, are done for illustrative purposes only and do not constitute a warranty or warranty alteration of any kind. Buyer shall be solely responsible for determining the suitability of PIP’s products for the Buyer’s intended purposes.

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