

# Protect 1300 MVR

## Moisture Vapor Transmission Reducing Primer



7875 Bliss Parkway North Ridgeville, OH 44039  
440-327-0015 440-353-0549 - FAX

**DESCRIPTION:**

Protective Industrial Polymers' **Protect 1300 MVR** primer is a 100% two-component epoxy primer specially formulated to deeply penetrate concrete slabs to reduce moisture vapor transmission. **Protect 1300 MVR** provides a Class 1 Vapor Suppression rating when applied over a properly prepared and cured concrete substrate at specified application thickness. It provides enhanced protection against failure of epoxy and urethane coatings due to elevated concrete moisture and moisture vapor levels.

**FEATURES:**

- 100% solids
- Excellent moisture tolerance
- Low Odor
- Blush resistant
- Low Viscosity
- Resistance to High Alkalinity
- Meets Requirements for ASTM F3010-13 (Standard Practice for Two-Component Resin Based Membrane-Forming Moisture Mitigation Systems.)

**CAPACITIES:**

- May be used on concrete exhibiting readings up to 25 lbs. (ASTM F1869-11)
- Effective at concrete relative humidity levels of <RH levels 95% (ASTM F2170-11)

**PACKAGING:**

**2.75 Gallon Kit:**

Protect 1300 MVR-A/5SF (Package contains 1.75 gal.)  
Protect 1300 MVR-B/1

**13.75 Gallon Kit:**

(2) Protect 1300 MVR-A/5 (Package contains 4.38 gal.)  
(1) Protect 1300 MVR-B/5

**141 Gallon Kit:**

(2)Protect 1300 MVR-A/55 (Package contains 45 gal.)  
(1) Protect 1300 MVR-B/55

**Volume Mix Ratio: 1.75A: 1B:**

**MATERIAL PROPERTIES\*:** Properties and results are based on laboratory testing at 72°F (22°C) %50 RH

Properties	Test Method	Results
Pot Life	SHYODO (150g Gram Mass)	25 minutes
Volume Solids (mixed)	ASTM D2369	100 %
Mixed Viscosity	ASTM D2196	800-1200 cPs
Compressive Strength	ASTM D695	15,000 psi
VOC-Volatile Organic Compound	ASTM D3960	0 g/l
Tensile Strength	ASTM D638	9500 psi
Permeance	ASTM E-96 (water)	20 mils- .065 16 mils -.080 10 mils -.12
Bond Strength	ASTM D7234	>200 psi
Dry Time (Gardener Circular Dry Time-Dry Hard)		10 hours
Flexural Strength	ASTM D790 (Break Point)	16000 psi

*Contamination and surface defects:* If contaminates including oil, silicone, mold release agents and/or other materials are present, resin systems may fisheye or crawl away from the surface. All surface contaminates should be removed with a suitable detergent prior to application. Solvent cleaning of silicone based contaminates is NOT RECOMMENDED. Please contact Technical Service for additional recommendations.

**INSPECTION AND APPLICATION:**

**Caution! Follow all precautions and instructions prior to installation.**

**SUBSTRATE:** The standard concrete substrate must be free of curing membranes, silicate surface hardener, paint, or sealer and be structurally sound. Do not coat if concrete contains Type III Portland Cement. If you suspect concrete has been treated or sealed, proceed with complete removal process. Consult your PIP representative for further instruction if silicate hardeners or membranes have been utilized. Concrete must have a minimum internal tensile strength of 200 psi when tested in accordance of ASTM C1583. Concrete must have a maximum relative humidity of 95% when tested as per ASTM F2170.

**MOISTURE:** Moisture and moisture vapor transmission rates are dynamic in nature and may change over time. Initial testing does not guarantee future results. Protective Industrial Polymers must be consulted if a written moisture mitigation warranty is required prior to product use.

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**CONTAMINATION:** Factors including the migration of oils, chemicals, excessive salts or Alkali Silica Reaction (ASR) in the concrete from will elevate the risk and may cause adhesion failures. Testing prior to application is always recommended.

**TEMPERATURE AND HUMIDITY:** During the application and cure of the coating, the substrate temperature, material temperature and room conditions must be maintained between 65°F (18°C) and 90°F (32°C). Relative Humidity (RH) should be limited to 30-80%. DO NOT apply coatings unless the surface temperature is more than five degree over the dew point.

### PREPARATION:

Surface dirt, grease, oil and contaminants must be removed by detergent scrubbing and rinsing with clean (clear) water.

**Mechanical Preparation:** Shot Blasting to a CSP #3 or greater is required method of preparation.

**CRACKS AND JOINTS:** All static non-moving cracks must be cleaned out and coated with Protect 1300 MVR primer prior to filling with a polymer or cementitious crack filler such as Protect Fine Crack Fill. Cracks primed with Protect 1300 MVR can also be filled by thickening the Protect 1300 MVR with a fumed silica thickening agent such as Cab-O-Sil or approved equal.

Moving control joints must be cleaned out and honored. Prime sides of the joint with Protect 1300 MVR and let cure prior to installing a flexible joint material such as Protect JF Epoxy or JF-Polyurea. Do not apply Protect 1300 MVR directly over flexible joint fillers.

### APPLICATION EQUIPMENT:

- Protective equipment and clothing as called for in the SDS (Safety Data Sheet)
- Jiffy® Mixer Blade model ES
- Clean container for mixing material
- Low speed high torque drill motor
- Foam or solid core, fiber free roller covers.
- Application Squeegee

### MIXING:

The mix ratio for Protect 1300 MVR is 1.75 gallons Part A to 1 gallon of Part B by volume. Mix the two components together for 2-3 minutes with a Jiffy® ES mix blade attached to a slow speed drill. Mix only enough material at one time that can be applied without exceeding the pot life. **Note:** Once this material is mixed it can't be resealed for later use. Material must be used as is. Do not thin or reduce with solvent.

### APPLICATION:

Protect 1300 MVR may be applied to the floor surface using a flat or notched squeegee. Pour material out immediately and spread over floor. Leaving the material sit in the pail longer than 5 minutes will result in an increase of viscosity and reduce performance properties. Back roll and evenly spread the wet coating using a solid core or foam roller. Care should be taken to overlap and cross lap, but not over roll the coating introducing air to the surface.

**SPREADING RATE:** To achieve full vapor transmission and class 1 designation, Protect 1300 MVR must be applied at a total film thickness of at least 16 mils. This can be achieved as either a single coating, or in two applications steps. The first coat must be a minimum of 8 mils. When out-gassing of the concrete is suspected or encountered, two coats are recommended. The first coat must be a minimum of 8 mils. Protect CPU color pack may be added on the second coat only in a two coat application to aid in hiding and color development. The maximum allowable color pack addition is 3 fl. oz per mixed gallon of Protect MVR. For use as a moisture-tolerant primer, material may be applied at a film thickness of 8 to 10 mils.

The best practice to assure proper application thickness and coverage is to measure and grid the floor.

**CURE TIME AND RECOAT:** Protect 1300 MVR must be allowed to cure a minimum of 9 hours at (70+F) before application of additional primer, epoxy or urethane coating. Coating must be cured sufficiently enough to accept foot traffic without encountering tackiness or leaving permanent footprints. The maximum re-coat time is 36 hours. If the maximum re-coat expires, the cured Protect 1300 MVR must be lightly sanded with a 100 grit sandpaper or sanding screen and another coat of Protect MVR must be applied at a minimum of 10 mils.

READ SDS (SAFETY DATA SHEET) FOR SAFETY AND PRECAUTIONS. USE PRODUCT AS DIRECTED FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN.

### MAINTENANCE

**CAUTION:** Heavy objects dragged across the surface will scratch all floor coatings. Avoid gouging or scratching the surface.

Pointed items or heavy items dropped on the floor may cause chipping or concrete pop out damage. Repair gouges, chip outs, and scratches as soon as possible to prevent moisture and chemical under cutting and permanent damage to the floor coating.

**TECHNICAL SUPPORT:** For application questions, please contact your salesman or PIP technical service at 440-327-0015

**DISPOSAL:** Dispose in accordance with federal, state, and local regulations.

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### 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 labels. 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.

**CONDITIONS OF USAGE:** Installation of all products purchased must be by professional installers periodically published by PIP or otherwise approved by PIP in writing. Modification to any of PIP's products voids the warranty. The installer shall maintain a written contemporaneous record of field conditions (including, without limitation, surface and atmospheric conditions, usage rates, and lot numbers of products installed). PIP reserves the right of inspection of any installed product, installation and maintenance records and records of field conditions and may conduct additional testing as is reasonably required to investigate any warranty claims. Warranty shall only apply for products or materials that have been paid for in full. Although rare, some floors at or below grade level are sometimes subjected to saturation by moisture from beneath the concrete floor slab. This moisture can travel through the concrete and creating the potential for delaminating from hydrostatic pressure and or ASR. Conditions contributing to this include heavy rainfall, broken pipes, excess hydration within fresh concrete, and other factors or defective and old concrete. These factors are difficult, if not impossible to predict. PIP recommends testing for hydrostatic drive and ASR in the concrete substrate prior to applying any polymer floor topping. The recommended test method is ASTM F 2170-11. ASR can be predicted by a higher than normal pH within the concrete. If high pH should be detected, it is recommended a lab test for ASR. If and when delamination of the floor occurs because of a moisture condition that exists beneath or in the concrete slab beyond the capacity of the individual product installed or failure of the concrete due to ASR, this Limited Warranty does not extend to such delaminating or topping failure. This writing constitutes the sole and only agreement of warranty relating to PIP products.