

PIP 1100

Oil Tolerant Primer System



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

DESCRIPTION:

Protective Industrial Polymers' **PIP 1100** primer is a two-component epoxy penetrating primer primarily designed for areas which require epoxy mortar resurfacing and are contaminated with petroleum based oils and grease. An aliphatic blended curing agent blend provides increased tolerance to oil.

PIP 1100 must be used in conjunction with another epoxy primer such as PIP 1000 to accept additional epoxy materials.

Application of **PIP 1100** requires a minimum of ½ one-half gallon to 1 gallon of xylene solvent with the 2.5-gallon kit for easier application and deeper penetration into the concrete. Maximum solvent addition is ¾ gallon addition to a 2.5 gallon mix to maintain a VOC content less than 250 g/L.

ADVANTAGES:

- Increases system bond to petroleum based oil contaminated concrete.
- Complies with VOC regulations for industrial maintenance coatings in the OTC and CA*.
(*excluding SCAQMD when thinned to maximum)

STORAGE: Materials should be stored in un-opened containers between 65°F (18°C) and 90°F (32°C) and at or below 50% RH.

SHELF LIFE: 1 year from date of manufacture (un-opened).

PACKAGING KITS/ PART NUMBERS:

2.5 Gallon Kit:
1100-A/5SF
1100-B/1

LIMITATIONS:

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

PIP 1100 is not highly recommended for coatings only applications. The bond of coatings is certainly improved over traditional epoxy primers, however imperfections such as fisheyes in the final finish are likely. An epoxy mortar application is greatly recommended for areas which are contaminated with these oils if aesthetics are extremely important.

MATERIAL PROPERTIES*:

Properties	Test Method	Results
Flash Point	ASTM D3278	≥215 °F (102°C)
Volume Solids (mixed as supplied)	ASTM D2369	100 %
Mixed Viscosity	ASTM D2196	400-700 cPs
Dry Time	ASTM D5895	Tack Free 6-8 hr
VOC-Volatile Organic Compound (As Supplied)	ASTM D3960	0 g/l clear ≤250 g/l with max thinning

CURED PROPERTIES*:

Properties	Test Method	Results
Adhesion to Concrete	ASTM D4541	350 psi concrete failure
Flexibility	ASTM D 522	0.31 (passes)
Tensile Strength	ASTM D2370	12,000 psi

*Properties and results are based on laboratory testing at 72°F (22°C) %50 RH, theoretical calculations and estimates. Typical properties, as stated, are to be considered as representative of current production and should not be treated as specifications.

CHEMICAL RESISTANCE*: Consult Protective Industrial Polymers for specific requirements.

INSPECTION AND APPLICATION:

Caution! Follow all precautions and instructions prior to installation.

SUBSTRATE: The substrate must be free of curing membranes, silicate surface hardener, paint, or sealer and be structurally sound. 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.

MOISTURE: Moisture and moisture vapor transmission rates are dynamic in nature and may change over time. Initial testing does not guarantee future results. If the relative humidity of the concrete substrate is over 75% (using ASTM F2170), Protective

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Industrial Polymers must be consulted and issue a written moisture mitigation recommendation prior to product use.

VAPOR/CONTAMINATION: Testing for MVT does not guarantee against future problems. If there is no known vapor barrier or the vapor barrier is inadequate, there is an elevated risk of bond failure. Other factors including the migration of oils, chemicals, excessive salts or Alkali Silica Reaction (ASR) from the concrete from may also elevate the risk of adhesion difficulties. Consult your PIP representative for approved mitigation treatments.

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.

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**
- **High quality short nap roller covers- ¼-3/8 inch nap**
- **Application Squeegee**

PREPARATION:

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

Mechanical Preparation: Shot Blasting the surface is the preferred method of preparation.

MIXING

Mix ratio by volume is 1.5 Parts A to 1 part B by volume. Mix all components together for 2-3 minutes with a Jiffy® ES mix blade attached to a slow speed drill. Xylene solvent addition is added after Part A and Part B is mixed. Up to 1 gallon of xylene solvent can be added per 2.5 gallons of resin (total 3.5 gallons) for a maximum concrete penetration. VOC rating at this dilution is < 250 g/l.

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.

APPLICATION:

APPLY PIP 1100 to the floor surface using a notched or flat squeegee depending on conditions and texture of the concrete. Spread evenly to avoid puddles. Back roll and evenly spread the wet coating using a ¼-3/16" inch nap non-shed roller. **PIP 1100** is designed to penetrate into the concrete rather than sit atop.

RECOMMENDED APPLICATION RATE:

7-10 mils (170-220 SF/Gal.

REPRIMING: **PIP 1100** can be re-primed with PIP 1000 series coatings after initial cure of the **PIP 1100** has taken place and is

tacky in nature. **PIP 1100** must have a minimum curing time of 3 hours before a second primer is applied. If **PIP 1100** is cured more than 12 hours especially if there is a substantial amount of noted neat coating film sitting on the surface, it is recommended to sand the cured **PIP 1100** with 60 grit sand paper or sanding screens.

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.

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

MAINTENANCE GUIDELINES:

Allow floor coating to cure at least one week before cleaning by mechanical means (IE: sweeper, scrubber, disc buffer).

CARE: Increased life of the floor will be seen with proper maintenance and will help maintain a fresh appearance of your new Protective Industrial Polymers floor. Regularly sweep to avoid ground in dirt and grit which can quickly dull the finish, decreasing the life of the coating. Spills should be removed quickly as certain chemicals may stain and can permanently damage the finish.

Only soft nylon brushes or white pads should be used on your new floor coating. Premature loss of gloss can be caused by hard abrasive bristle Polypropylene (Tynex®) brushes.

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. Plasticizer migration from rubber tires can permanently stain the floor coating. If a rubber tire is planned to set on the floor for a long period of time, place a piece of acrylic sheet between the tire and the floor to prevent tire staining. Rubber burns from quick stops and starts from lift trucks can heat the coating to its softening point causing permanent damage and marking.

REPAIR: Repair gouges, chip outs, and scratches as soon as possible to prevent moisture and chemical under cutting and permanent damage to the floor coating.

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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. **Moisture Vapor Transmission (MVT) and ASR (Alkali Silica Reaction) Disclaimer and Exclusion:** 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 collect between floor toppings 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 MVT and/or the presence of ASR in the concrete substrate prior to applying any polymer floor topping. The recommended test method for MVT 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.