Technical Data Sheet

PIP JF-Polyurea

Polyurea Joint Filler

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

DESCRIPTION:

PIP JF-Polyurea is an interior, self- leveling, plural component, 100% solids, rapid curing, polyurea horizontal joint filler. It is used to quickly fill interior control joints, random cracks, and freezer door thresholds. It also provides protection against deterioration of joint edges/shoulders in heavy, hard wheel traffic areas.

USES:

PIP JF-Polyurea can be used in warehouses, freezers, food processing facilities, or any interior facility which require a semi-rigid joint filler.

ADVANTAGES:

- Odorless
- Rapid cure in minutes
- High chemical resistance
- Excellent impact and abrasion resistance
- Semi-Rigid, +300% elongation
- Remains flexible in cold environments
- USDA, FDA, CFIA, FSIS compliant
- Zero VOC's
- Cures at extremely low temperatures (-40F).
- Easy 1:1 by volume mix ratio.

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

SHELF LIFE: Un-opened containers 1 year from date of manufacture.

PACKAGING KITS:

PIP JF-Polyurea Bulk 10 gallon pail kit
JF-Polyurea-A/5 Part A
JF-Polyurea-B/5 Part B

OPTIONS:

Tinting: PIP CPU colorant can be added if a pigmented joint filler is required. 1 quart of CPU colorant may be added to the 5 gallon pail of Part A prior to plural component static mixing or pumping.

LIMITATIONS:

Surface Contamination: If contaminates of oils, silicones, mold release agents and/or others are present, JF-Polyurea may exhibit a poor bond. Surface contaminates should be removed with a suitable detergent prior to application. **PIP JF-Polyurea** will yellow/amber when exposed to UV light or outdoor sun.

CURED PROPERTIES*:

Properties	Test Method	Results
Hardness	ASTM D2240	90 Shore A
Tensile Strength	ASTM D638	1200-1400 psi
Tensile Modulus	ASTM D638	600-900 psi
Elongation	ASTM D638	250-550%
Adhesion to Concrete	ASTM D4541	350 psi concrete failure
Ready to Shave		20 minutes
Tack Free		< 5 minutes
Tear Strength	ASTM D24	250 psi

*Properties and results are based on laboratory testing at 72°F (22°C) %50 RH, theoretical calculations and estimates.

COVERAGE RATE:

Linear Feet per Gallon (Approximate)

Inches	1/4	1/2	3/4	1
1/4	308	154	103	72
1/2	154	72	51	38
3/4	103	51	38	26
1	72	38	26	19

INSPECTION AND APPLICATION:

Caution! Follow all precautions and instructions prior to installation.

CHECK THE SUBSTRATE CONCRETE:

Recommended time of concrete cure 30 days prior to installing joint filler or joint sealant.

Substrate concrete must be free of curing membrane, silicate surface hardener, paint, or sealer and be structurally sound. If you suspect the concrete has been treated or sealed, prepare substrate for complete removal of treatment.

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

EXCLUSION: Testing for MVT is critical, however it does not guarantee against future problems. If there is no vapor barrier or the vapor barrier is damaged, this to can contribute to floor failure. Contamination to concrete from oils, chemicals, excessive salts or Alkali Silica Reaction (ASR) may also contribute to floor failure.

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APPLICATION EQUIPMENT:

- **Protective equipment and clothing as called for in the SDS (Safety Data Sheet)**
- **1:1 ratio machine dispensing pump**
- **Static Mix Tip 32 element 18" x 3/8"**
- **Razor to shave flat**

CHEMICAL RESISTANCE*:

PIP JF-Polyurea	1 Day	7 Days
ACIDS, INORGANIC		
10% Hydrochloric	E	E
10% Nitric	E	E
50% Phosphoric	G	F
10% Sulfuric	G	F
ACIDS, ORGANIC		
10% Acetic	G	F
10 % Citric	G	F
ALKALIES		
10% Ammonium Hydroxide	E	E
50% Sodium Hydroxide	E	E
SOLVENTS		
Ethylene Glycol	E	G
Isopropanol	F	F
Methanol	P	P
d-Limonene	E	E
Jet Fuel	G	G
Gasoline	P	P
Mineral Spirits	F	F
Xylene	P	P
MISCELLANEOUS		
20% Ammonium Nitrate	E	E
Brake Fluid	F	P
Bleach	E	E
Motor Oil	E	E
Skydrol®	F	P
20% Sodium Chloride	E	E
10% TSP	E	E

*Based on spot testing of the clear coating after 14 days of cure. Pigmented versions may see reduced chemical resistance and staining.

Legend: **E- Excellent (Not Effected)**
G-Good (Limited Negative Effect)
F-Fair (Moderate Negative Effect)
P-Poor (Unsatisfactory)

PREPARATION:
Surface dirt, grease, oil and contaminates must be removed by detergent scrubbing and rinsing with clean (clear) water. Cut Joint must be completely dry or **PIP JF-Polyurea** will out gas.

Diamond Saw: Cut the joint to the desired thickness and depth. Deep joints must be filled with dry sand or backer rod.

RECOAT: **PIP JF-Polyurea** can be coated with other PIP epoxy and urethanes after filling the joint and shaving flat. The cured surface must be sanded with 100 grit sand paper. Sand to a uniform dulled surface. Remove all sanding debris and scrub with detergent and rinse with clean water. Surface must be dry before coating.

BARE CONCRETE APPLICATION: **PIP JF-Polyurea** does not require a primer, but epoxy primers can be used.

MIXING:
Volume Mix Ratio: 1A: 1B
PIP JF-Polyurea is a rapid set polymer and requires a 1:1 ratio pump and static mixer to install (Do not hand mix).

COLORS: The color pack should be mixed with Part A prior to filling the dispensing machine.

MIX: It is necessary to pre-mix the Part A prior to filling dispensing pump until homogenous throughout. CURING

(DRYING): Allow the **PIP JF-Polyurea** to set for 20 minutes and shave flat to the flooring surface with a razor. Cure (dry) for a minimum 1 hour after application at 75°F (24°C) and 50% RH before grinding and applying the other coatings as a top coat. Only open the floor to light traffic after sufficient cure, allow more time for low temperatures and higher humidity or for heavier traffic.

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 filler to cure at least one day before cleaning by mechanical means (IE: sweeper, scrubber, disc buffer).
Use only neutral non butyl cleaning detergents on your joint filler. Test any new cleaning product on a non-conspicuous area prior to using to avoid damage to the filler.
CAUTION: Heavy objects dragged across the joint can scratch and damage the filler. Avoid gouging or scratching the surface.
Pointed items or heavy items dropped on the floor may cause chipping or concrete pop out damage.

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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 MOSITURE, 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.