

### JP18 POLYUREA JOINT SEALANT

#### 1 – DESCRIPTION

**Silifix JP18** is a self-leveling, 100% solid, flexible, two component, 1:1 volumetric ratio, rapid curing polyurea joint and crack filler. The product has been formulated for fast strength development and exceptional durability, making it especially suited for filling random cracks and control joints for industrial floor applications, which receive heavy vehicle traffic. It is recommended for repair of cracks, where time and temperature are serious considerations.

#### 2– PROPERTIES

- 100% solid, VOC free, no solvents
- Fast curing and setting formula
- Flexible and durable
- Horizontal applications
- Tough performance reduces joint repair and maintenance
- Applications can be reopened to vehicle or foot traffic in 1 hour
- Temperature and moisture insensitive
- Excellent thermal stability
- Good tensile and structural strength
- Resistant to petrochemicals and chemicals

#### 3 – APPLICATION AREAS

Concrete crack repairing and joint filling on the areas;

- Airports runways
- Roofs and balcony decks
- Parking lots and garages
- Industrial facilities
- Warehouse floors
- Manufacturing facilities
- Bottling and canning facilities
- Food processing facilities
- Cold storage facilities

#### 4 – INSTRUCTIONS

**Surface Preparation:** Remove all dust, debris, oil and any other contamination from the area or joint to be repaired / filled. The surface must be completely dry prior to using the sealant. Dampness and substrates with high moisture will trigger extensive curing of the sealant within a very short period of time. This may cause an excess of bubbling and foaming within the sealant. If necessary use a suitable primer for surface preparation. New concrete must be cured at least 28 days.

**Cartridge set up:** Polyurea JH 1080 applied with double cartridges and it has to be used in combination with special static mixer with a manual or pneumatic dispensing gun (it sets too quickly to allow hand mixing). Both components of the cartridge have to be brought up to a processing temperature of about 20°C, which have to be held in a constant range. Before using, shake or fluff the cartridges very carefully for approximately 3 minutes, then stand cartridge upright for 5 minutes to allow air bubbles rise to the top of cartridge. Remove plastic cap and plug from the top of the cartridge. Attach the mixer; be sure it is seated properly. While preparing cartridge for dispensing, keep cartridge in an upright position to prevent material from leaking out of cartridge. Insert cartridge into the dispenser. Hold the dispenser at a 45° angle and slowly apply pressure to dispenser, moving the product up through the nozzle until it reaches the tip, then dispense one stroke of material unto a disposable container until both materials flow evenly from cartridge.

**Application:** Place the mixing nozzle directly over the crack, joint or repair area. Dispense material directly from static mixing nozzle into joints until the entire void is filled using full smooth trigger pulls. The process of dispensing should be done completely and quickly avoiding any breaks, because the material can react immediately in the static mixer and then the discharge is blocked. Maintain a steady flow of material to eliminate overlapping as this may cause bubbling within the material. Joints should be slightly over filled and shaved level to facilitate a smooth appearance. Allow to set for approximately 45 minutes and then use a scraper to shave excess material from top. If you have any difficulty in dispensing product, replace the mixer with a new one. Never transfer a used mixer to a new cartridge. Allow material to fully cure before subjecting repaired area to any type of traffic.

**Clean up:** Clean all tools and equipment immediately with xylene, toluene or MEK. Follow manufacturer's safety recommendations when using any solvent. Cured materials can be only be removed mechanically.

#### Limitations:

- For best results, materials should be maintained between 18 and 30°C (65 and 86°F).
- Do not proceed with application if atmospheric relative humidity is >85%
- Be aware of condensation; the substrate must be at least 3 °C above dew point to reduce the risk of condensation.
- Prior to application, confirm substrate moisture content, relative air humidity and dew point.
- For horizontal use only.
- Do not thin. Solvents may prevent proper cure
- This product is aromatic, therefore, as with all aromatics, over a period of time colour change will occur if exposed to UV rays. This will not cause any negative effect on the physical properties of the product.

#### 5- PACKAGING

600 ml side by side double cartridge: 300 ml (Iso component) and 300 ml (Amine component)  
2x 20 l (10 gallon kits) is available on request.

## 6- STORAGE AND SHELF LIFE

Store the product in a ventilated place away from direct exposure to sunlight. Keep cartridges between 15 -25 °C for quality reasons. Shelf life of the unopened original packaging is twelve months from manufacturing date.

## 7 – COLOR

Standard color is concrete gray. Custom colors available upon request.

## 8 – SAFETY

Contains isocyanate MDI. Avoid breathing vapours. Avoid contact with skin and eyes. Take precautions during application. Wear suitable protective clothing, gloves and eye / face protection. Adequate ventilation of the working area is recommended. Consult SDS for further information.

## 9- TECHNICAL PROPERTIES

### Component properties

|                  | Unit               | Method      | Isocyanate Prepolymer | Amine Resin |
|------------------|--------------------|-------------|-----------------------|-------------|
| Density (25°C)   | gr/cm <sup>3</sup> | ASTM D 1217 | 1,09-1,13             | 1,00-1,02   |
| Viscosity (25°C) | mPa.s              | ASTM D 4878 | 700-800               | 400-600     |
| Shelf life       | months             | -----       | 12 months             | 12 months   |

### Physical Properties

|                                        | METHOD      | DATAS                            |
|----------------------------------------|-------------|----------------------------------|
| Chemical structure                     |             | A: MDI Prepolymer B: Amine Resin |
| VOC content (%)                        | ASTM D1259  | 0                                |
| Solid content (%)                      | ASTM D2697  | 100                              |
| Gel time (min)                         | --          | 1-1,5                            |
| Tack free time (min)                   | --          | 3-5                              |
| Recoat time (hr)                       | --          | 0-12 (without pretreatment)      |
| Post cure time (hr)                    | --          | 24                               |
| Density (gr/cm <sup>3</sup> )          | ASTM D792   | 0,99-1,03                        |
| Tensile strength (MPa)                 | ASTM D638   | ≥ 9                              |
| Elongation at break (%)                | ASTM D638   | ≥200                             |
| Hardness (Shore A)                     | ASTM D2240  | 85-88                            |
| Pull off strength (N/mm <sup>2</sup> ) | ASTM D 4541 | Concrete: ≥2 Steel: ≥5           |

## 10 – JOINT COVERAGE CALCULATION

| Theoretical coverage per gallon |      |                 |        |                |        |               |      |               |        |
|---------------------------------|------|-----------------|--------|----------------|--------|---------------|------|---------------|--------|
| Joint depth                     |      | Joint width     |        | Joint width    |        | Joint width   |      | Joint width   |        |
| inch                            | mm   | 1/2 " (12,7 mm) |        | 3/4 " ( 19 mm) |        | 1 " (25,4 mm) |      | 1 ½ " (38 mm) |        |
| 1/8"                            | 3,17 | 308 ft          | 94 m   | 206 ft         | 63 m   | 154 ft        | 47   | 103 ft        | 31,5 m |
| 1/4"                            | 6,35 | 154 ft          | 47 m   | 103 ft         | 31,5 m | 77 ft         | 23,5 | 51,5 ft       | 16 m   |
| 1/2"                            | 12,7 | 77 ft           | 23,5 m | 51,5 ft        | 16 m   | 38 ft         | 11,6 | 26 ft         | 8 m    |
| 1"                              | 25,4 | 38 ft           | 11,8 m | 26 ft          | 8 m    | 19 ft         | 5,8  | 13 ft         | 4 m    |

| Theoretical coverage per 600 ml cartridge |      |                 |      |                |       |               |     |               |       |
|-------------------------------------------|------|-----------------|------|----------------|-------|---------------|-----|---------------|-------|
| Joint depth                               |      | Joint width     |      | Joint width    |       | Joint width   |     | Joint width   |       |
| inch                                      | mm   | 1/2 " (12,7 mm) |      | 3/4 " ( 19 mm) |       | 1 " (25,4 mm) |     | 1 ½ " (38 mm) |       |
| 1/8"                                      | 3,17 | 53 ft           | 16 m | 36 ft          | 11 m  | 26,5 ft       | 8 m | 18 ft         | 5,5 m |
| 1/4"                                      | 6,35 | 26,5 ft         | 8 m  | 18 ft          | 5,5 m | 13 ft         | 4 m | 9 ft          | 2,7 m |
| 1/2"                                      | 12,7 | 13 ft           | 4 m  | 9 ft           | 2,7 m | 6,5 ft        | 2 m | 4,5 ft        | 1,4 m |
| 1"                                        | 25,4 | 6,5 ft          | 2 m  | 4,5 ft         | 1,4 m | 3,3 ft        | 1 m | 2,3 ft        | 0,7 m |

Note: The above chart is a theoretical guide only. Coverage and yields shown do not include allowances for loss or waste and variations in job conditions. Each user must establish its own factors for loss from experience.

## DISCLAIMER

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