**1.01 DESCRIPTION**
P-Tuff® Sealant CR-SF is a two component, low odor, liquid applied, polyurethane system designed to repair concrete and masonry substrates. The new surface will protect concrete from weather, corrosion, erosion, freeze/thaw spalling and chemical attack. Please use the correct product grade that complies with VOC regulations as per federal, state, county and city regulations/codes at the place of installation of product.

**1.02 FEATURES**
- Waterproof
- Excellent Abrasion Resistance
- Repairs Can Be Made in Hot or Cold Weather
- Rapid Cure Allows Traffic to Resume in 30 Minutes

**1.03 TYPICAL USES**
- Hairline Cracks
- Pavement Divots
- Thin, Wide or Deep Cracks
- Concrete Highway & Pothole Repair

**1.04 COLOR**
Side-A: yellow, Side-B: blue

**1.05 PACKAGING**
- 2-gallon kit: 1 gallon (3.78 liters) can Side-A, 1 gallon (3.78 liters) can Side-B
- 10-gallon kit: 5 gallon (18.9 liters) pail of Side-A and 5 gallon (18.9 liters) pail of Side-B

**1.06 SURFACE PREPARATION**
Hairline Crack Repair: Blow out the cracks with dry compressed air to remove loose and unsound material.

Large Crack Repair: Remove loose and unsound material in the crack by blowing the cracks with dry compressed air. Fill the cracks with sand that is at least 12 mesh or larger.

**APPLICATION**

2.01 APPLICATION BASICS
P-Tuff® Sealant CR-SF should be applied using a proportioning dispensing system.

This type of system transfers, meters, and mixes the co-reactive Side-A and Side-B components at a very high rate and at the required proportions. The machine transfers from 1 gallon (3.78 liters) or 5 gallon (18.9 liters) containers through proportioning pumps at the specified ratio of 1:1. Both components are pumped through a disposable static mixing tube. The combined mixture can then be dispensed onto the gravel or sand prepared crack.

Material left in the static mixing tube will thicken in approximately 1 minute and solidify in 3 minutes. Static mixing tube should then be discarded.

2.02 FINISHING
P-Tuff® Sealant CR-SF is a rapid cure material that will be completely cured in approximately 5-10 minutes. P-Tuff® Sealant CR-SF is very sensitive to heat and moisture. Higher temperatures and/or high humidity will accelerate the cure time. Low temperature and/or low humidity may slightly extend the cure time.

2.03 CLEAN-UP
Equipment should be cleaned immediately after use with an environmentally safe solvent, as permitted under local regulations.

2.04 CHEMICAL RESISTANCE
P-Tuff® Sealant CR-SF was unaffected by the following chemicals (Based on ASTM D-814):

### TECHNICAL DATA (Based on draw down films)

<table>
<thead>
<tr>
<th>Property</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Gravity</td>
<td>A-Side: 1.10 ± 0.1, B-Side: 0.95 ± 0.1</td>
</tr>
<tr>
<td>Viscosity at 75°F (26°C)</td>
<td>A-Side: 20 ± 5 cps, B-Side: 20 ± 5 cps</td>
</tr>
<tr>
<td>Mixing Ratio (A:B) by Volume</td>
<td>1:1 (A:B)</td>
</tr>
<tr>
<td>Pot Life @ 77°F (25°C) 50% RH</td>
<td>240-300 seconds</td>
</tr>
<tr>
<td>Gel Time @ 75°F (24°C), 50% RH</td>
<td>50-70 seconds</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt;150°F (&gt;65.6°C)</td>
</tr>
<tr>
<td>Hardness, ASTM D-2240 Shore A</td>
<td>70 ± 5</td>
</tr>
<tr>
<td>Tensile Strength, ASTM D-412</td>
<td>4000 ± 400 psi (28 ±0.3 mPa)</td>
</tr>
<tr>
<td>Compressive Strength**, ASTM C-42</td>
<td>4750± 400 psi (32.76 ±2.7 kN/m)</td>
</tr>
<tr>
<td>Elongation, ASTM D-412</td>
<td>7 ± 0.50%</td>
</tr>
<tr>
<td>Bond Strength to Concrete</td>
<td>Excellent</td>
</tr>
<tr>
<td>Thermal Compatibility to Concrete</td>
<td>Good</td>
</tr>
</tbody>
</table>

**Note:** Compressive strength was checked on composite of silica sand (12 mesh, 6.5 Moh’s minimum hardness) and 18 to 20% of P-Tuff® CR in a 4” x 8” cylinder (10.14 cm x 20.18 cm).
### Acidic Chemicals
- Acetic Acid, 1%
- Acetic Acid, 10%
- Hydrochloric Acid, 1%
- Hydrochloric Acid, 10%
- Sulfuric Acid, 1%
- Sulfuric Acid, 10%

### Basic Chemicals
- Ammonium Hydroxide, 1%
- Ammonium Hydroxide, 10%

### Oils, Fuels and Other Chemicals
- Hydraulic Oil
- Motor Oil
- Unleaded Gas (Regular)
- Unleaded Gas (Premium)
- Hexane
- IPA MIBK
- Xylene

2.05 SHELF LIFE AND STORAGE
- **P-Tuff® Sealant CR-SF** has a shelf life of 12 months from date of manufacture in original, factory-sealed containers when stored indoors at a temperature between 60-95°F (15-35°C).

2.06 LIMITATIONS
- Surfaces must be dry, clean and free of foreign matter.
- Should be used in well-ventilated areas due to its strong odor.
- Containers that have been opened must be used as soon as possible.
- Do not dilute under any circumstance.
- **P-Tuff® Sealant CR-SF** is for concrete crack repairs only. Slippery when wet.
- Refer to General and Safety Guidelines for more information.

**WARNING:** This product contains isocyanates and solvent.