POLY-TUFF SYSTEMS INTERNATIONAL
WATERPROOFING DIVISION



# P-TUFF® SEALANT E-101 SL (PTS E-101 SL)

## A Single Component, Water Curable, High Performance, 100% Solids Joint Sealant for Horizontal and Vertical Applications

### 1.01 DESCRIPTION

**P-Tuff® Sealant E-101 SL is a high performance water-curable interior or exterior joint sealant for use in both moving and non-moving joint applications. P-Tuff® Sealant E-101 SL provides a long lasting, weather tight seal to a variety of common building substrates without the strenuous limitations of joint design by most manufacturers of construction sealants. The sealant may be applied to green or fully cured concrete. The tremendous adhesive strength and modulus of the sealant combined with the water curing method allows the sealant to be applied in depth up to 1:1 width to depth joint ratio and maintain a water-tight seal. 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

- Applied at Any Required Thickness
- Bonds to Damp Concrete or Masonry
- Economical
- Excellent Weathering
- Fast Curing
- Highly Flexible over Extreme Temperatures
- Labor Saving
- Meets SCAQMD VOC Requirements
- Meets the Criteria of ASTM C-836 & E-96
- No Mixing
- No Odor
- Non-Gassing
- Primerless on Most Substrates
- Resists Dirt
- User Friendly

### 1.03 TYPICAL USES

- Block
- Concrete
- Cove Joints
- Curtain Walls
- Expansion Joints
- Masonry
- Parapets
- Plywood
- Pre-Cast Concrete
- Roofing Details
- Siding
- Weather Sealing
- Window Sealing
- Window/Door Frames

### 1.04 SUBSTRATES

- Aluminum
- Block
- Brick
- Concrete
- EPD
- Foam
- Galvanized Metal
- Masonry
- Metal
- PVC
- SBS Mod Bit
- Stone
- Vinyl
- Wood

| TECHNICAL DATA (Based on draw down films) | |
|---|---|
| Specific Gravity (Depending on Color) | 1.60 ± 0.1 |
| Viscosity (Brookfield RVT, TF Spindle, 4RPM, 80°F (27°C)) | >1,000,000 cps |
| Odor | Mild Ester Smell |
| Service Temperature, Continuous Service | -40°F to 200°F (-40 to 93.3°C) |
| Low Temperature Flex | -10°F(-23.3°C) pas 1/4" Mandrel |
| Slump (Sag), ASTM C-697 | Zero Slum |
| Hardness, ASTM D-2240 Shore A | 30 ± 3 |
| Shear Strength, ASTM D-1002 | 150 ± 15 psi (1.03 ± 0.1 mPa) |
| Tack-free Time, ASTM C-679 | 40-50 minutes |
| Elongation, ASTM D-412 | 300-400 ± 50% |
| Shrinkage, after 14 days | No Measurable Shrinkage |

### COMPLIANCES

- **ASTM C-920, Type S, Grade NS, Class 25, use NT, T, M, G, A, and O**
- **Federal Specification TT-S-00230-C Type II, Class A**
- **Corps of Engineers CRD-C-541, Type II, Class A**
- **Canadian Standards Board CAN 19, 13-M82**

### 1.05 COLOR

Black, Dark Bronze, Limestone, Stone, Tan, Grey and White

Custom colors are available upon request. Minimum quantity requiredand additional costs may apply.

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**1.06 PACKAGING**

10.1 oz (299 ml) Cartridge: 24 per case, 60 cases per pallet
28 oz (828 ml) Sausage: 12 per case, 40 cases per pallet
2 gallon (7.56 liter) pails
5 gallon (18.9 liter) pails

**1.07 JOINT PREPARATION**

Joints should be cleaned, dry, and free from all contamination including dirt, oils, grease, tar, wax, rust and any other substance that may inhibit the sealant's performance.

| Joint Width inches (mm) | Joint Depth inches (mm) |
|---|---|
| 1/4 - 1/2 (6-13) | 1/4 (6) |
| 1/2 - 3/4 (13-19) | 1/4 - 3/8 (6-10) |
| 3/4 - 1 (19-25) | 3/8 - 1/2 (10-13) |
| 1 - 2 (25-50) | 1/2 (13) |

**1.08 JOINT DESIGN**

Because of the common problems related to failure of horizontal joint design, P-Tuff® Sealant E-101 SL sealant becomes one of the most forgiving products in the construction industry. The installation of the P-Tuff® Sealant E-101 SL Sealant may be designed with a depth to width ratio of 1:1 (joint depth equals joint width). It is recommended that the joint shall be no less than 1/4" wide by 1/4" deep (6 mm x 6 mm). The maximum depth of sealant shall be 3/4"-1" in joints 3/14" to 1" wide (1.9 mm to 2.54 cm). Otherwise, control the depth of the sealant by using a backer rod that is 25% larger than the joint opening at standard temperature. Where the joint configuration will not permit a backer rod, it is recommended that an alternative bond breaker be used. Prevention of three-sided adhesion is necessary through the use of dust free sand, a backer rod or bond breaker tape to ensure proper joint movement and a long lasting weatherproof seal. Joints should be caulked flush.

**1. 09 SAW AND CONTROL JOINTS**

Saw and control joints may be sealed while the concrete is damp or green as long as the joints are clean. Newly sawed joints may be sealed immediately after they are cleaned.

**1.10 METAL**

Prepare all metal in a manner to ensure maximum adhesion. Remove all rust, scale and residue. Remove films, coatings and oils with an appropriate solvent such as alcohol.

It is recommended that Kynar-coated substrates be tested for adhesion prior to starting the project. Please contact PSI for specific application guidelines and recommendations.

**1.11 CONCRETE**

Concrete and masonry substrates shall be clean and of solid density prior to the application of the sealant. Concrete and masonry substrates shall be fully cured and dry prior to the application of the sealant. Remove any contamination by mechanical abrasion, sand blasting or power washing.

**1.12 WOOD**

Wood shall be clean, sound and dry prior to sealant application. Treated wood shall be allowed to weather for six (6) months. Coatings and paint shall be removed (or tested for compatibility) to ensure a proper bond.

**1.13 PRIMING**

In most instances P-Tuff® Sealant E-101 SL will not require a prime. However, certain applications or substrates, such as Kynar-coated metal, may require a primer to ensure a long lasting bond and weatherproof seal. It is the user's responsibility to determine the need for a primer. It is recommended that wherever prolonged immersion is anticipated, a primer be used for best performance.

**APPLICATION**

**2.01 APPLICATION BASICS**

P-Tuff® Sealant E-101 SL is a one-component, ready-to-use material that requires no mixing or preparation. It is recommended that a quality caulking gun be used to ensure ease of application. Apply when temperatures are above 40°F (4.4°C). When all the joint preparation is complete, cut the plastic nozzle at a 45-degree angle to approximately the size of the joint opening. Begin gunning to fill the joint from the bottom to the surface, ensuring there are no voids or air pockets. Dry tooling is recommended to create a strong mechanical bond against the joint faces. *Do not use P-Tuff® Sealant E-101 SL in temperatures below 30°F (-1.1°C). P-Tuff® Sealant E-101 SL cannot be used in vertical or overhead working conditions without the use of P-Tuff® Insta-Thick powder.

P-Tuff® Sealant E-101 SL may be water-cured in bulk applications by mixing 4 oz of water per gallon. The water-curing ability of the P-Tuff® Sealant E-101 SL will significantly speed the cure of the sealant from 1-2 hours in length.

**2.02 FINISHING AND CLEANUP**

Wet sealant can be removed using a solvent such as alcohol, or soap and water. Cured P-Tuff® Sealant E-101 SL can be removed by abrading or scraping the substrate. Equipment should be cleaned immediately after use with an environmentally-safe solvent, as permitted under local regulations.

**2.03 CURING**

P-Tuff® Sealant E-101 SL typically skins over within 15-45 minutes and cures through in 3 to 7 days depending on temperature, humidity and thickness. Water curing is the preferred method when caulking in low temperatures. Lower temperatures and humidity prolong cure time. Higher temperatures accelerate cure time.

P-Tuff® Sealant E-101 SL may be water cured by hand or drill mixing 6 ounces (118 ml) of water per gallon for faster curing (approximately 2 hours). It is recommended that a quality caulking gun be used to ensure ease of application. The material is fast cure and dries in 1-2 hours at 75°F (24°C) and therefore should be mixed in no greater than 2 gallon pails.

**2.04 SHELF LIFE AND STORAGE**

P-Tuff® Sealant E-101 SL 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).

**2.05 LIMITATIONS**

- P-Tuff® Sealant E-101 SL should not be used in direct contact with single component, moisture cured urethane coatings without use of an epoxy primer. Sealant shall be cured for 3-5 days prior to any direct coating with water-cured E-Tuff® 100 or P-Tuff® Classic.
- Avoid prolonged contact with skin. Uncured adhesive irritates

eyes. In case of contact with eyes, immediately flush with water. Call a physician.

- In areas of prolonged chemical exposure contact Technical Services for recommendations. Do not allow uncured P-Tuff® Sealant E-101 SL to come into contact with uncured silicone sealants.
- Allow treated wood to "cure" for six months prior to application per APA guidelines. Do not use in areas subject to continuous immersion without a primer.
- Horizontal applications will require tooling. Do not store in elevated temperatures. P-Tuff® Sealant E-101 SL will not freeze during storage. To ensure easy gunning, bring to room temperature before application.
- Read and ensure that the most up-to-date SDS and technical guidelines are being followed. Proper use and application are the responsibility of the applicator.

**KEEP OUT OF REACH OF CHILDREN**



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