Q-SEAL™ 293-P605 – 1-Component, Self-Leveling, Silicone Sealant

PRODUCT DESCRIPTION

Q-Seal™ 293-P605 is a one-component, moisture-curing, cold-applied, self-leveling, silicone sealant formulated for sealing joints and cracks in pavement. It provides a weather and UV resistant seal which can be used as a sealant for saw cuts in concrete and asphalt surfaces.
This product has been formulated to meet or exceed ASTM D5893 “Standard Specification for Cold-Applied, Single-Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements”.

CURING

Q-Seal™ 293-P605 cures from exposure to atmospheric moisture. The sealant should not be applied in confined spaces where atmospheric moisture is not present to cure the sealant.

Q-Seal™ 293-P605 will be tack free in approximately 90 minutes at 77°F (25°C) and 50% RH. The full cure time is less than 21 days and is dependent on temperature, humidity, and surface area exposed to air. At low temperatures and humidity, the tack free and curing times will be extended, while higher temperatures and humidity will shorten tack free and curing times.

FEATURES AND BENEFITS

- Neutral-cure silicone sealant
- Very low modulus
- Self-leveling and flowable, no tooling required
- Weather and UV resistant
- Jet fuel and road salt resistant
- One-component, cold-applied: ready to use as supplied and no mixing required. **Q-Seal™ 293-P605** reacts with atmospheric moisture to cure
- Bonds to most substrates with no primer required
- Tack free in about 90 minutes at standard conditions, allowing pavement to be opened for traffic
- High elongation providing flexibility for dynamic joint movement through a wide range of temperatures
- Meets or exceeds FAA Material Specification Item P-605 "Joint Sealants for Pavements"

SURFACE PREPARATION AND APPLICATION

- **Q-Seal™ 293-P605** pails and cartridges must be kept at temperatures at or below 90°F (32°C). Keep product in original, unopened containers until use.
- It is the responsibility of the installer to ensure that the substrate is clean and dry (free of dust, water and ice) before installation. Pressurized air or water should be used to remove dust and debris from the substrate. Product adhesion and performance depends on proper substrate condition and installation procedures.
- Not recommended for conditions where immersion or continuous water/moisture exposure is expected. Applications should have proper drainage.
- Apply using recommended caulking gun or dispensing equipment. Apply out of the original packaging.
- Apply using consistent pressure and steady movement along the joint to ensure a proper, uniform bead of sealant is applied in the joint. The joint should be filled from the bottom up.
- **Q-Seal™ 293-P605** does not expand during the curing process and is self-leveling, so it can be dispensed into the joint up to the desired height. The sealant should be recessed below the pavement surface as recommended.
- Clean any **Q-Seal™ 293-P605** when it is still wet. Once cured, the sealant must be removed by mechanical means. Excess sealant on the pavement surface should be removed.

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TECHNICAL DATA
Physical Properties @ 77°F (25°C)

PROPERTY	TYPICAL VALUE	TEST METHOD	ASTM D5893 REQUIREMENT
Adhesion in Peel	25 pli	ASTM C794	
Bond Capability	Non-immersed: Pass	ASTM D5893	No cracks or separation
	Water-immersed: Pass		No cracks or separation
	Oven-aged: Pass		No cracks or separation
Color	Gray		
Cure Time	< 21 days		21-day cure
Effect of Accelerated Weathering at 5000 Hours	Pass	ASTM D5893 ASTM C793	Pass
Elongation	> 1000%	ASTM D412	600% minimum
Extrusion Rate	> 50 mL/min	ASTM C1183	20 mL/min minimum
Hardness, Shore “00”	35 – 40	ASTM D2240	30 minimum
Joint Movement Capability, Concrete	+100%/-50%	ASTM C719	
Resilience	77%	ASTM C793	75% minimum
Skin Time at RT, 50% RH	50 min ± 10 min		
Specific Gravity	1.13 – 1.17 g/cm^3		
Tack Free Time	90 min ± 15 min	ASTM C679	5 hours maximum
Tensile Stress at 150% Elongation	< 15 psi	ASTM D412	45 psi maximum
Viscosity	50,000 cps ± 10,000 cps		

SAFETY AND HANDLING PRECAUTIONS
May cause eye, skin, and respiratory irritation. Wear protective clothing, gloves, and eye protection. Please refer to the Safety Data Sheet for **Q-Seal™ 293-P605** for more information.

PACKAGING INFORMATION
- 50-gallon (189 L) drums
- 4.5-gallon (17 L) pails
- 29-fl. oz. (858 mL) plastic cartridges (12 per case)
- 20-fl. oz. (591 mL) sausages (16 per case)

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JOINT DESIGN AND COVERAGE

Joint Width	Recessed Below Surface (minimum)	Sealant Thickness	Total Joint Depth (minimum)	Backer Rod Diameter	Yield (linear feet per gallon)
¼ inch (6.4 mm)	⅜ inch (9.5 mm)	¼ inch (6.4 mm)	1 ⅛ inch (28.6 mm)	⅜ inch (9.5 mm)	308 ft/gal (24.8 m/L)
⅜ inch (9.5 mm)	⅜ inch (9.5 mm)	¼ inch (6.4 mm)	1 ⅜ inch (34.9 mm)	½ inch (12.7 mm)	205 ft/gal (16.5 m/L)
½ inch (12.7 mm)	⅜ inch (9.5 mm)	¼ inch (6.4 mm)	1 ⅜ inch (34.9 mm)	⅝ inch (15.9 mm)	154 ft/gal (12.4 m/L)
¾ inch (19.1 mm)	⅜ inch (9.5 mm)	⅜ inch (9.5 mm)	1 ⅞ inch (47.6 mm)	1 inch (25.4 mm)	68 ft/gal (5.5 m/L)
1 inch (25.4 mm)	⅜ inch (9.5 mm)	½ inch (12.7 mm)	2 ⅛ inch (54.0 mm)	1 ¼ inch (31.8 mm)	39 ft/gal (3.1 m/L)
> 1 inch (> 25.4 mm)	½ inch (12.7 mm)	½ inch (12.7 mm)	> 2 ⅛ inch (54.0 mm)	> 1 ¼ inch (31.8 mm)	< 39 ft/gal (< 3.1 m/L)

The sealant must be recessed a minimum of ⅜ inch (9.5 mm) below the pavement surface. The sealant bead should be a minimum of ¼ inch (6.4 mm) thick and maximum of ½ inch (12.7 mm) thick. For joints under 1 inch (25.4 mm) wide, the depth of the sealant should be 1/2 of the width of the joint – not applicable for joints ¼ inch (6.4 mm) wide or over 1 inch (25.4 mm) wide.

It is recommended to use a closed cell, expanded polyethylene foam as the backer rod. The backer rod should be about 25% larger than the joint width to fit tightly in the joint. If the correct backer rod is not used, there will most likely be reduced performance of the sealant in the joint.

For more information contact:
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