Technical

Data Sheet

WVCO

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FastPatch EJC-50

Polyurethane Expansion Joint Sealant (Type M, Grade P, Class-50)

DESCRIPTION

FastPatch EJC-50 is a flexible, two component, rapid setting, polyurethane-based joint sealant. EJC-50 is an ASTM C920 Type M, Grade P, Class 50 self-leveling (SL) expansion joint compound with excellent elongation and rapid set time.

WHERE TO USE

- **Expansion Joints**
- **Airport Runways and Highways**
- **Parking Decks, Bridge Decks, Roofing, Sidewalks**

FEATURES AND BENEFITS

- **Rapid Set**– as little as 1 hour return to service
- **Highly Elastic**–moves with the joint
- **Self Leveling**–flows easily, completely fills joint
- **Flexible at Freezing Temperatures**
- **Passes Hockman Class-50 Cycling**
- **100% Solids, 0 VOC**–environmentally friendly
- **1:1 Ratio by Volume**–easy application

PACKAGING

600-mL Cartridge
1500-mL Cartridge
5-Gallon Buckets
50-Gallon Drums

COLOR

Black

YIELD

600-mL Cartridge = 36.61in³
1500-mL Cartridge = 91.5 in³
5-Gallon Bucket Sets (10-gal total) = 2310in³
50-Gallon Drum Sets (100-gal total) = 13.36ft³

SHELF LIFE

12 months when properly stored.

STORAGE

Store and ship this product in a clean, dry, low-humidity, shaded or covered environment at 60 to 90°F (15 to 32° C).

TECHNICAL INFORMATION

Typical Properties

Hockman Class 50 Cycling (ASTM C719)	Pass with no loss of adhesion
Service Temperature, ° F (° C)	-30 to 170 (-34 - 77)
VOC, lbs/gal (g/L), ASTM D 2369	0
Tensile, ASTM D412, psi	200
Elongation, ASTM D412, %	> 1,000
Modulus, ASTM D412, ksi	0.04
Hardness, ASTM D 2240, Shore A	20-30
Mixed Viscosity, 70°F (21°C), cP	4,000
Gel Time, ASTM D2240, 70°F (21°C), minutes	5
Set Time, 70°F (21°C), minutes	50
Return to Service, 70°F (21°C), minutes	60

Processing Parameters

Application Temp ° F (° C)	50 - 100 (10 - 37)
Mix Ratio By Volume	1:1
Application Equipment	Pneumatic Cartridge Applicator; 1:1 WVCO Meter or Equivalent

APPLICATION

SURFACE PREPARATION: CONCRETE

1. The concrete surface being repaired should be fully cured 28 days, structurally sound (200psi or greater according to ASTM D7234), clean (ASTM D4258), and dry (less than 5%, ASTM E1907).
2. Joint concrete surfaces must be sound, dry, clean, free of dirt, moisture, loose particles, oil, asphalt, tar, paint, wax, rust, waterproofing and curing/parting compounds, membranes, and other foreign matter.
3. Clean concrete where necessary by grinding, sandblasting, or wire brushing.

OLD CONCRETE PREVIOUSLY CAULKED

1. Remove all previous joint sealing material by saw cut. Priming is required if previous jointing compound is not removed by saw-cut (see PRIMING section below).
2. If joint sides have absorbed oils etc., cut away sufficient concrete to ensure a clean, fresh surface.

INSTALLATION

JOINT DESIGN

1. Use POLYQuik® EJC-50 only in joints where shrinkage and movement will be less than or equal to +/-50%.
2. POLYQuik® EJC-50 is not recommended for joints greater than 2" (50mm) wide.
3. Joints filled with POLYQuik® EJC-50 should be designed and prepared according to industry ACI standards. To ensure joint compound performance, sealant depth should be ½ sealant width.
4. POLYQuik® EJC-50 should not be used on slopes greater than 9%.
5. Backer rods should be used according to ACI guidelines in all expansion joints.

PRIMING

1. For expansion joint movement greater than 12.5%, concrete priming is required. Prime with POLYQuik® 1K Primer, POLYPrime or Epoxy Primer. Contact Willamette Valley for proper selection.
2. On surfaces other than concrete, conduct a test application to verify adhesion and primer selection. If practical, send a substrate sample to Willamette Valley for adhesion analysis.
3. For joint movement less than 12.5%, priming may not be required. While priming is typically recommended by manufacturers and industry associations, it is not always a requirement. Decisions whether to use primer are the responsibility of the engineer and contractor alike.
4. Priming is required for water immersed applications.
5. To minimize contamination of adjacent surfaces, apply masking tape before priming and remove before the sealant has begun to thicken and set.
6. Prime a thin, uniform film (typically 1– 10 mils). Avoid buildup of excess film thickness and application of primer beyond joint faces. Excess primer can be blown out of the joint surface with 120-psi dry air while still liquid.
7. Contact Willamette Valley Co. for specific recommendations on further priming applications. Jointing compound application times will vary with primer selection.

METER DISPENSED

PROCESSING

1. Use WVCO meter or equivalent at a 1 to 1 ratio by volume. For metering applications contact Willamette Valley Company Precision Technologies division for equipment recommendations.
2. Condition RESIN and ISO to approximately 70°F (21°C) for 24 hours before using.
3. Mechanically mix RESIN for 30-60 minutes, do not over mix. Use mix blades that are 1/3 the diameter of the container.
4. Test the meter operation of EJC-50 before dispensing in joint area. Use a 13-mm diameter mix tube with 32-elements or recommended equivalent (contact Willamette Valley Co. for approved equivalents). Initially dispense into a mold-released container. Verify EJC-50 color/mixing is uniform and the material sets uniformly in 1-hour at 70°F (21°C). Cut container away from cured urethane to thoroughly inspect material.

APPLICATION

1. Dispense into jointing area using a pressure that is efficient and comfortable for the individual application technician.
2. Application pressures and rates will vary with jointing configuration. Pressures should not fall below 40-psi on WVCO meters. Shallow joints will require lower application pressures compared to deep joints.
3. Fill the joint from the bottom up. Completely fill joint in 1-pass, avoid overfilling. In cases where slab elevations differ, fill to the lower slab height. Overfilled joints should be leveled with the surface of the concrete.
4. Topping sand can be applied until refusal.
5. Stopping more than 30-seconds can clog mix-tubes. Change mix-tubes if dispensing stops more than 30-seconds at 70°F (21°C). Elevated temperatures decrease mix-tube life.
6. Periodically inspect applied jointing material for uniformity and proper set. If inspected areas are non-uniform, change mix tube and ensure that meter operation is in compliance.

CARTRIDGE DISPENSED

PROCESSING

1. Condition cartridges to approximately 70°F (21°C) for 24-hours before using.
2. Use a 32-element 13-mm diameter static mix tube with a pneumatic gun. Hand operated guns are not recommended due to the increased chances of poor mixing. Contact supplier for further instructions if hand operated guns are required.

CARTRIDGE APPLICATION

1. Use a 1-to-1 pneumatic dispenser (≤80 psi) and ensure that the pneumatic dispenser is the proper sizing.
2. Remove the retaining nut and caps from the cartridge.
3. Keep the cartridge upright during assembly.
4. Check alignment of plungers inside cartridge; adjust if necessary.
5. Place mix-tube on cartridge nozzle and hand tighten the retaining nut over the mix-tube.
6. Keep cartridge upright and load into applicator gun.
7. Begin dispensing with cartridge upright to remove any trapped air.
8. Dispense initial material (20-40mL) outside the repair area.
9. Change mix-tubes if dispensing stops more than 30-seconds at 70°F (21°C). Elevated temperatures decrease mix-tube life.
10. Fill the joint from the bottom up in one pass and avoid overfilling (typically expansion joints are recessed). Avoid triggering on and off. In cases where slab elevations are different, fill to the lower slab height.
11. Topping sand can be applied until refusal.

NOTE: Material sets approximately in 1-hour at 70°F (21°C). Colder temperatures will slow the cure. Warmer temperatures will speed the cure. Return to service time is typically 1-hour at 70°F (21°C).

NOTE: EJC-50 volumetric requirements for linear feet calculations will vary based on joint dimensions. Contact Willamette Valley Co. for more information.

HEALTH AND SAFETY

Before handling, you should become familiar with the Material Safety Data Sheet (MSDS) regarding the risks and safe use of this product. To obtain an MSDS please call 800-333-9826 or send an email to: msds@wilvaco.com

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