

Technical
Data Sheet



Willamette Valley Company
www.wilvaco.com
800.333.9826

Partnering through service,
innovation, and integrity

FastPatch EJC-100

Polyurethane Expansion Joint Sealant (Type M, Grade P, Class 100/50)

DESCRIPTION

FastPatch EJC-100 is a flexible, two-component, rapid-setting, polyurethane-based joint sealant. EJC-100 is an ASTM C920 Type M, Grade P, Class 100/50 expansion joint compound with excellent elongation and cure.

WHERE TO USE

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

FEATURES AND BENEFITS

- **Rapid Cure**— 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 100/50 Cycling**
- **100% Solids, 0 VOC**—environmentally friendly
- **1:1 Ratio by Volume**—easy application

PACKAGING

- Cartridge
- 5-Gallon Buckets
- 50-Gallon Drums

COLOR

- Black
- Gray

YIELD

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

SHELF LIFE

1 year 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 100/50 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 Strength , ASTM D412, psi	200
Elongation , ASTM D412, %	> 1,000
Hardness , ASTM D 2240, Shore A	10-20
Mixed Viscosity , 70°F (21°C), cP	3,000
Gel Time , ASTM D2240, 70°F (21°C), minutes	5-10
Return to Service , 70°F (21°C), hour	≤1

Processing Parameters

Application Temp ° F (° C)	40-100 (4-37)
Mix Ratio By Volume	1:1
Application Equipment	Pneumatic Cartridge Applicator; 1:1 WVCO Meter or Equivalent. Mix tube: 13-32 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 previously applied joint sealing material by saw cut. Priming is required if previous sealing material 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.

STEEL

1. Steel surfaces must be cleaned before blasting (SSPC-SP1). Remove any sharp edges and other surface imperfections.
2. Dry abrasive blast surface according to SSPC SP-6/NACE No. 3.
3. Remove any non-visible soluble salt contamination (less than 3mg/cm², NACE GG186, CHLOR*RID).
4. Prime steel according to WVCO guidelines.

INSTALLATION

JOINT DESIGN

1. Use EJC-100 only in joints where shrinkage and movement will be less than or equal to +100% / -50%.
2. EJC-100 is not recommended for joints wider than 2" (50mm). Wider joint installations may be possible, contact WVCO for more information.
3. Joints filled with EJC-100 should be designed and prepared according to industry ACI standards. To ensure joint compound performance, sealant depth should be ½ sealant width.
4. EJC-100 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® 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/or contractor.
4. Masking tape may be applied to adjacent surfaces before priming and removed after sealant placement to ensure a clean application.
5. Apply primer in a thin, uniform film (typically 1- 10 mils). Avoid buildup of excess film thickness and application of primer beyond joint faces.
6. Contact Willamette Valley Co. for specific recommendations on further priming applications. Joint sealant application times will vary with primer selection and ambient temperature.

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-100 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-100 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 dispensing rates will vary with joint 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 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.
4. Topping sand can be applied until refusal.
5. Stopping more than 3 minutes can clog mix-tubes. Change mix-tubes if dispensing stops more than 3 minutes 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 or battery powered gun. Hand actuated dispensing guns are not recommended due to the increased chances of poor mixing. Contact supplier for further instructions if hand actuated applications are required.

CARTRIDGE APPLICATION

1. Use a 1-to-1 pneumatic dispenser (normally 30-50 psi, not to exceed 80 psi) and ensure that the pneumatic dispenser is the correct size for the cartridge.
2. Keep the cartridge upright during assembly.
3. Remove the retaining nut and caps from the cartridge.
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 3 minutes 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 or less at 70°F (21°C).

NOTE: EJC-100 volumetric requirements for linear feet calculations will vary based on joint dimensions. Contact Willamette Valley Co. for more information.

WILLAMETTE VALLEY COMPANY

www.wilvaco.com
info@wilvaco.com

DIVISIONS

WESTERN DIVISION

1075 Arrowsmith Street
PO Box 2280
Eugene, OR 97402
Tel 541.484.9621
www.POLYQUIK.com
www.SPIKEFAST.com

EASTERN DIVISION

6662 Marbut Road
Lithonia, GA 30058
Tel 888.878.9826

MIDWEST DIVISION

1549 Hwy 2
Two Harbors, MN 55616
Tel 218.834.3922

PRECISION TECHNOLOGIES DIVISION

675 McKinley Street
Eugene, OR 97402
Tel 541.484.2368
www.pre-tec.com

SOUTHERN DIVISION

100 Dixie Mae Drive
PO Box 4450
Pineville, Louisiana 71361
Tel 318.640.5077

SUBSIDIARIES

CANADIAN WILLAMETTE

19081- 27th Avenue
Surrey BC V3S 5T1
Tel. 800.663.4298

ECLECTIC PRODUCTS INC.

Corporate Office
1075 Arrowsmith Street
Eugene, OR 97402
Tel 541.284.4667
www.eclecticproducts.com

IDAHO MILL & GRAIN

445 North 430 West Hwy
PO Box 188
Malad City, Idaho 83252
Tel 208.766.2206

TAPEL WILLAMETTE LTD. S.A.

Av. Estero La Posada 3625
Parque Industrial Coronel
Coronel, Chile
Tel 011.56.41.2.928.100
www.tapel.cl

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.

DISCLAIMER OF WARRANTY

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