Wabo®XPE

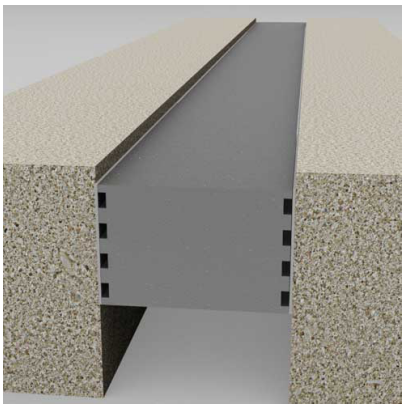
Preformed impermeable UV stable gray foam joint seal

Features	Benefits
• Simplicity	Minimal components and flexibility of seal allows for quick joint repairs and short traffic closures.
• Versatile movement	Has a working range of 30% tension and 60% compression
• Chemically resistant	Resistant to abrasion, oxidation oils, gasoline and salts
• Nitrogen blown, closed cell foam construction	Cells collapse and elongate during movement cycle so the seal does not get larger in cross section. Seal can be installed close to top of riding surface; thus, minimizing debris accumulation.
	No additional processing in foam seal manufacturing is required to assure the seal is watertight.

DESCRIPTION:

Wabo®XPE is a preformed, impermeable, UV stable gray foam joint seal that is bonded into place with a two component 100% solids modified epoxy adhesive.

The low density, closed cell cross-linked nitrogen blown joint seal contains no EVA (ethylene vinyl acetate). Wabo®XPE is designed to accommodate various movements and variations in joint widths through compression and tension with a working range of 60% compression and 30% tension. The bond strength of the joint seal is enhanced through manufactured grooves, spaced along the seal edges.



RECOMMENDED FOR:

- Sealing expansion joints on bridges, parking decks, stadiums, and buildings
- Repair and maintenance of existing joints
- Expansion joints with varying joint widths
- Noise walls and barriers
- Flood channels

PACKAGING/COVERAGE:

- Wabo®XPE seal is cut to length and boxed per limitations of required shipping methods.
- Wabo®Foam Seal Bonder Adhesive (Gray) is a 2 part gray 3:1 epoxy adhesive.

	Volume	Container
Part A	(3 quarts)	1 Gallon
Part B	(1 quart)	1 quart

Seal Depth		Adhesive Yield	
2”	50 mm	50 LF	15.2 m
2.5”	65 mm	40 LF	15.2 m
3”	75 mm	35 LF	10.7 m
3.5”	90 mm	30 LF	9.1 m

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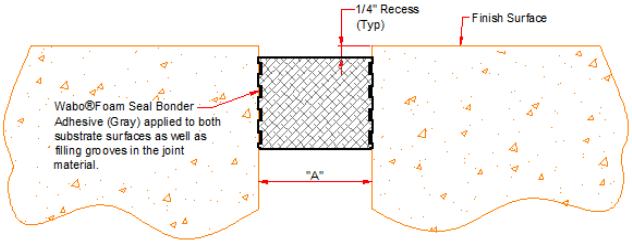
TECHNICAL DATA:

Design Information

The seal shall be designed with a movement working range of 60% compression and 30% tension. Depth of seal shall not be less the 70% of its uncompressed width. Seal shall be manufactured with groove sidewalls 1/8" (3mm) wide by 1/8" deep (3mm) and spaced between ¼" (6mm) to ½" (13mm) apart and run along the entire length of the bond surfaces of the seal to ensure an effective and quality surface for adhesion.



Movement Table

SEAL SIZE		JOINT OPENING "A" @ MIDRANGE TEMPERATURE		JOINT OPENING "A" RANGE					
				MIN.		MAX.		TOTAL	
MODEL NO.	Width x Height	in	Mm	in	mm	in	mm	in	mm
XPE 1250	1 1/4 x 2	1.0	25	0.50	12	1.63	41	1.13	29
XPE 1375	1 3/8 x 2	1.125	29	0.55	14	1.79	45	1.24	31
XPE 1625	1 5/8 x 2	1.375	35	0.65	17	2.11	54	1.46	37
XPE 2000	2 x 2	1.625	42	0.80	20	2.60	66	1.80	46
XPE 2375	2 3/8 x 2	2.00	51	0.95	24	3.09	78	2.14	54
XPE 2500	2 1/2 x 2	2.125	54	1.00	25	3.25	83	2.25	57
XPE 2750	2 3/4 x 2	2.375	61	1.10	28	3.58	91	2.48	63
XPE 3000	3 x 2 1/2	2.50	64	1.20	30	3.90	99	2.70	69
XPE 3250	3 1/4 x 2 1/2	2.75	70	1.30	33	4.23	107	2.93	74
XPE 3500	3 1/2 x 2 1/2	3.00	75	1.40	36	4.55	116	3.15	80
XPE 3750	3 3/4 x 3	3.125	80	1.50	38	4.875	124	3.375	86
XPE 4000	4 x 3	3.375	86	1.60	41	5.20	132	3.60	91
XPE 4500	4 1/2 x 3	3.75	96	1.80	46	5.85	149	4.05	103
XPE 5000	5 x 3 1/2	4.25	108	2.00	51	6.50	165	4.50	114

NOTE: Seal chart shows standard sizes. Made to order seal sizes are available. Contact WBA with your project requirements.

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MATERIAL PROPERTIES:

Seal Profile - Wabo®XPE profile is a UV stable joint seal that consists of an impermeable closed cell, cross-linked, low density polyethylene non-extrudable foam material.

PHYSICAL PROPERTIES	ASTM TEST METHOD	REQUIREMENTS
Color		Gray
Tensile Strength	D3575, Suffix T	110-130 psi
Compression Set (22 hrs @ 158°F)	D1056, Suffix B 2 hour recovery	10-16%
Water Absorption (by weight)	D3575 Suffix L	<0.03 lbf/ft^2
Elongation @ Break	D3575	180-210%
Tear Strength	D3575 Suffix G	14-20 lbf/in
Density	D3575 Suffix W	1.8-2.2 lbf/ft^3
Toxicity	ISO-10993.5	Pass (not cytotoxic)

Adhesive - Wabo®Foam Seal Bonder Adhesive (Gray) is a 100% solids, two component moisture insensitive modified epoxy adhesive. Pot life of mixed material is 32-36 minutes

Cured Adhesive

PHYSICAL PROPERTIES	ASTM TEST METHOD	REQUIREMENTS
Tensile Strength, min.	D638	3000 psi (20 MPa)
Compressive Strength, min.	D695	7000 psi (48 MPa)
Hardness, Shore D, min.	D2240	75
Water Absorption, by weight	D570	0.25% max.
Elongation at Break	D638	5% max.
Bond Strength, min.	C882	2000 psi (13 MPa)

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APPLICATION:

INSTALLATION SUMMARY:

- **Concrete -** joint interface must be dry and clean (free of dirt, coatings, rust, greases, oil and other contaminants), sound and durable. New concrete must be cured (min. 14 days). Loose, contaminated, spalled, and deteriorated concrete must be removed to sound concrete and repaired prior to placement. Any spalling, voids or structural cracking at the joint interface must be repaired.
- **Steel** - steel substrates should be sound, steel surfaces must be abrasive blasted SP-10 near white, immediately prior to installation.
- **WaboCrete Elastomeric Concrete** – Once header has achieved cure time (see product data sheet for times) remove form work. Abrasive blast the vertical face of the opening. The profile should be close to an 80 to 100 grit sandpaper texture. Grinding is acceptable if an aggressive wheel is used. Blow off the area using cleaned compressed air.
- Measure the joint opening width. The nominal width of the seal should be 15% larger than the joint opening at midrange temperature but never less than 10% oversized or greater than 35% oversized.
- Pre-mix Wabo®Foam Seal Bonder Adhesive (Gray) components A and B separately. For smaller batches mix 3 parts of A with 1 part of B in a clean plastic pail. Mix for approximately 3 minutes or until there is no marbling.
- Apply mixed Wabo®Foam Seal Bonder Adhesive (Gray) by brush, trowel, caulking gun or by hand with rubber gloves. Apply enough to coat the substrate to approximately 40 mils (1 mm). Apply enough bonder to match the width of the seal on both sides of the opening. This is best applied by using a gloved hand or brush.
- Lay the pre–cut piece of seal over the joint opening on its side and apply epoxy filling the grooves of the seal. Flip the seal and apply epoxy in remaining grooves.
- Push seal into joint opening. Do not stretch or place in at an angle. This will elongate the seal. If needed a blunt tool such as a wooden axe handle can be used to push the seal down. A typical recess of ¼" is suggested from finished grade using the lower side of the deck if there is an offset.
- Start cleaning the seal immediately using a plastic putty knife. Wipe down the seal with a clean white cotton rag saturated in denatured alcohol.
- DO NOT ALLOW THE ADHESIVE TO DRY ON TOP OF THE SEAL.
- Walk the joint line inspecting your work before the adhesive gels, and make adjustments as needed.
- Allow 20 minutes (at 77°F) before opening the location to traffic. Longer cure times may be needed during colder temperatures.

FOR BEST RESULTS:

- Repair any spalls, voids, or structural cracking at the joint interface.
- Do not install if the joint's anticipated movement will exceed the seal's movement range.
- Do NOT allow any of the components to freeze prior to installation. Store all components out of direct sunlight in a dry location between 50°F (10°C) and 90°F (32°C). DO NOT store in high humidity.
- Shelf life of the Wabo®Foam Seal Bonder Adhesive (Gray) is 2 years.
- Periodically inspect the applied material and repair localized areas as needed. Consult a Watson Bowman Acme representative for additional information.
- Make certain the most current version
- of the product data sheet is being used. Please consult the website (www.watsonbowmanacme.com) or
- contact a customer service representative.

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- Proper application is the responsibility of the user. Field visits by Watson Bowman Acme personnel are for the purpose of making technical recommendations only.

OPTIONS/EQUIPMENT:

- Heating splice iron for Wabo®XPE joint seal profile.
- Wabo®GelAdhesive with Well Made AG400 caulking gun in lieu of Wabo®Foam Seal Bonder Adhesive (Gray).

RELATED DOCUMENTS:

- Material Safety Data Sheets
- Wabo®XPE Specification
- Wabo®XPE Sales Drawings
- Wabo®XPE Installation Procedure

LIMITED WARRANTY:

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