StormLock

Advanced Hybrid Adhesive/Sealant

StormLock is a high strength, fast-curing, durable and flexible, UV resistant true hybrid sealant; utilizing advanced chemistry to keep moving joints sealed and weathertight.



Features and Benefits

- Industry Leading Flexibility: +/- 50% Joint Movement
- Long-Lasting UV & Weather Protection
- Exceptional Adhesion over widest variety of substrates
- Fast Skinning & 24-Hour Cure
- Will Not Shrink, Crack, or Breakdown
- UV Resistant, Non-Yellowing, & Color Stable
- Paintable in One Hour & Non-Corrosive
- Can be applied to wet or damp surfaces
- Resistant to Most Chemicals
- Wide Temperature Range (-75°F to 220°F)
- Tenacious Adhesion to ExoSeal Liquid Applied Flashing
- No Solvent or Isocyanate Contents
- Bubbling Resistant
- Ultra-Low VOC Content (18g/l)

Suitable Applications

- Fenestration installation: aluminum, vinyl, & wood window frames
- Panel walls, Precast units, Fascia, & Parapets
- Storefront systems Expansion Joints
- Precast Concrete
- Kitchen & Bath Countertops
- Roofing, Plumbing, HVAC/R, & Sanitary Seals
- Transportation Seals & Marine Cabins
- Siding, Exterior Trim, Vents, Ducts, & Gutters
- Exterior or Interior & Above Grade Use

Product Information

Packaging
- 10.3 fl oz (305 ml) cartridges
- 24 cartridges per carton
- 20 fl oz (591 ml) sausages (ProPaks)
- 16 sausages per carton

Colors
- White, Bronze, and Black
- For color availability in bulk packaging, please call Customer Service at 800-447-6774.

Yield
- See page 3 for charts.

Storage
Store in original, unopened containers in a cool, dry area away from heat and direct sunlight.

Recommended storage temperature is below 80°F (27°C). Exposure to elevated temperatures may reduce product shelf life.

Shelf Life
Cartridges and Sausages (ProPaks): 12 months from date of manufacture, when properly stored.

VOC Content
15 g/L or 0.13 lbs./gal.

Tenacious Adhesion to Building Material Substrates Including:

CMU, masonry, concrete, brick, slate, slab, stucco, stone, marble, OSB, plywood, PTL (pressure treated lumber), weathered wood, clapboard, metal, aluminum, vinyl, exterior gypsum, fiber cement siding, painted surfaces, glass, PVC, insulated foam materials, PVDF Coatings, and Kynar.

Approved Specifications:

- ASTM C920 Type S, Grade NS, Class 50, Use NT, A, M, G
- AAMA 808.3, 803.3 (Type I), & 802.3 (Type II) Approved
- Federal Specification: TT-S-00230C, Type II, Class A
- USDA Approved

Application

1) **StormLock sealant comes ready to use. For smooth, controlled dispensing from 10.3 oz cartridges, a heavy-duty manual caulking gun with a 26:1 thrust ratio or a battery-powered caulking gun with comparable dispensing force is recommended.**

Service Temperature range is -75 to 220 degrees F (-59 to 104 degrees C). Application temperature range is 0 degrees F to 120 degrees F (-18 degrees C to 49 degrees C).

2) Remove Dirt, Grease, Moisture, and any foreign debris from surface to be sealed or bonded. Allow to dry thoroughly.

3) Cut nozzle at an angle to the desired bead size. Insert a puncture tool through the nozzle and pierce the inner foil seal several times at different angles.



The inner foil seal must be fully opened to allow adequate material flow. Load cartridge into caulking gun and push sealant ahead of the nozzle to form a uniform bead.

Limit sealant thickness to ¼" (6 mm) or less.

4) In ideal conditions, the depth of the sealant should be half the width of the joint to be filled. Sealant joint depth should ideally fall between the maximum depth of 1/2" and the minimum depth of 1/4".

5) Fill joints from the deepest point to the surface by holding an appropriately sized nozzle against the back of the joint.

6) Dry or Wet tooling may be utilized in the field. Proper tooling results in the correct bead shape, neat joints, and optimal adhesion.

7) Use of closed cell or soft backer rod may be necessary for deep joints. If joint depth does not allow the use of backer rod then a bond breaker polyethylene strip must be used in order to prevent three-point bonding.

Surface Preparation

Substrates must be structurally sound, fully cured, dry and clean prior to sealant application. Substrates should be free of the following: dirt, moisture, loose particles, oil, grease, asphalt, tar, paint, wax, rust, curing or parting compounds, and sealant residue. If applying directly to a waterproofing compound or membrane, prior testing is recommended. StormLock may be used in sealant joints designed in accordance with the *SWR Institute's Sealants:* ***The Professional's Guide***.

Curing Time

The curing time for StormLock varies with temperature and humidity. Lower temperatures and humidity will extend curing times. Assuming 75 degrees F (24 degrees C), 50% relative humidity, joint width of 1/2" and joint depth of 1/4", StormLock skins in 20 minutes or less, tack free time of approximately 40 minutes, and reaches full cure in approximately 1-2 days.

StormLock Test Data

PROPERTY	Test Method	Results
Joint Movement Capability, %	ASTM C 719	± 50
Modulus	ASTM D 412	High
Tensile Strength, psi	ASTM D 412	250
Elongation, %	ASTM D 412	850
Rheological (sag in vertical displacement), at 120° F (49° C)	ASTM C 639	No sag
Physical Properties (Cured)	ASTM D 1004	Rubber
Extrusion rate, g/min	ASTM C 1183	320
Hardness, Shore A, at standard conditions	ASTM C 661	40 +/- 5
Water Ready Time	MNA Method	1 Hour
Paint Ready Time		1 Hour, depending on temperature & humidity
Skin Over Time (min)	ASTM C 679	< 20
Tack-free time by touch (min)		40
Full Cure Time		24 Hours
Temperature Range		-75°F to 220°F
Intermittent Temperature Range		300°F
Stain and color change	ASTM C 510	Passes (no visible stain)
Artificial weathering, Xenon arc, 2,000 hrs	QUV Weatherometer	UV-A, No Change
Mildew Resistance		Mold & Mildew Resistant when cured
Weight % Solids		>99
Bond durability,* pli on glass, aluminum, vinyl, and concrete, ±50% movement	ASTM C 719	Passes
AAMA 802.3-16, Type II Back Bedding Glazing Compound	ASTM C 794	Passes
AAMA 803.3-16, Type I	ASTM C 794	Passes
AAMA 808.3-16, Type I (gunnable)	ASTM C 794	Passes
*All properties derived from lab conditions (77 degrees F at 50% relative humidity)		
Test results were obtained under labaratory conditions. Minor variations can be expected		

TABLE 1

JOINT WIDTH AND SEALANT DEPTH	
JOINT WIDTH IN (MM)	SEALANT DEPTH AT MIDPOINT, IN (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 – 1-1/2 (25–38)	1/2 (13)

YIELD

JOINT DEPTH (INCHES)	LINEAR FEET PER GALLON* JOINT WIDTH (INCHES)						
	1/4	3/8	1/2	5/8	3/4	7/8	1
1/4	308	205	154	122	–	–	–
3/8	–	–	–	82	68	58	51
1/2	–	–	–	–	51	44	38

***One gallon equals approximately 12 cartridges.**

Clean Up

1) Clean equipment immediately after use with Xylene or Mineral Spirits. Use appropriate manufacturers precautions when handling solvents. Please Note that solvent use may damage substrate materials such as siding or trim.

2) Do not use solvents to clean hands or skin. Clean hands or skin with detergent and water.

3) Use a sharp edged cutting tool to remove cured sealant.

4) Remove thin remaining films by abrading.

To Achieve Best Performance

1) Do not allow uncured StormLock sealant to come into contact with alcohol-based solvents or materials.

2) Do not use as a traffic bearing sealant.

3) Do not use for continuous immersion in water.

4) It is recommended to use a backing material for joints greater than 3/8” (9.5mm).

5) StormLock can be painted over after a thin film or skin forms on the sealant surface. Using rigid paints or coatings over flexible sealants like StormLock can result in a loss of adhesion of the applied paint or coating, due to the potential movement of the sealant as it maintains its bond to substrates. Therefore, it is recommended that the painting or coating applicator conduct on-site testing before proceeding.

6) Not intended for structural glazing applications

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7) Do not exceed 45 psig when used in air powered caulking guns.

8) The user is ultimately responsible for determining the suitability of StormLock Adhesive & Sealant for their intended application of use. If unsure then prior testing is recommended.

Limited Warranty

We warrant this product to be free from manufacturing defects and to meet the technical properties as stated on this technical data page if used as directed & within the shelf life. We make no other warranty or guarantee, whether expressed or implied, including warranties of merchantability or fitness for a particular purpose with respect to our products. For professional use only.

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