Product Data Sheet

willseal® 600

BREATHABLE PRIMARY SEAL FOR VERTICAL APPLICATIONS

DESCRIPTION

Willseal®600 is a pre-compressed, self-expanding foam joint sealant, engineered to perform as a highly flexible, weather-tight, primary seal in vertical exterior applications. Willseal 600 can also provide the ideal foundation for a large variety of wet sealants, such as silicone, polyurethane, polysulfide, and acrylic if desired.

Unlike conventional wet sealant and backer rod methods, Willseal 600 is not susceptible to breakdowns caused by excessive or rapid joint movements, thus protecting structures against rain, wind, dust, and sound. Willseal 600 is waterproof to a wind driven rain at 12.5psf (70mph) yet it is vapor permeable, making an optimal addition to any air barrier system, cavity wall joint, and interior partition application.

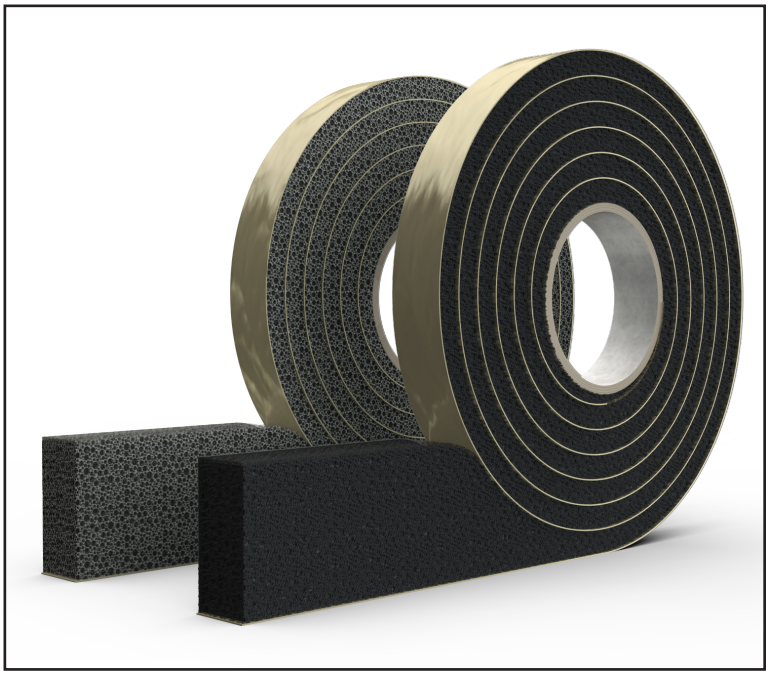
MATERIAL

Willseal 600 consists of 3 elements: a foundation of super-resilient micro-cell polyurethane foam, an impregnation of flame retardant, hydrophobic UV stabilized acrylic emulsion, and a pressure-sensitive adhesive with embedded scrim to prevent stretching or pulling during installation.

Willseal 600 is supplied pre-compressed on a roll or in sticks with the PSA on one side for ease of installation. Willseal 600 is self-extinguishing and has a flame spread of 0 with a smoke development rating of 5 per ASTM E 84 and is chemically compatible with all types of commercial construction. (For fully fire rated joints see Willseal FR per UL 2079.)

APPLICATIONS

- Primary expansion, control, isolation, & retrofit joints
- Secondary construction joints - behind wet applied sealants if desired
- Exterior Panel Systems - Masonry, Stone, EIFS, Curtain Walls
- Pre-cast concrete walls, Tilt-up walls
- Window and flashing applications
- Interior vapor, dust, acoustical & air control



TYPICAL PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	VALUE
Color		Black (Standard) Grey (Upon Request)
Thermal Conductivity	ASTM C 518	0.28 – 0.30 Btu-in/hr-°F-ft^2
Thermal Resistance	ASTM C 518	3.3 hr – 3.6 hr-°F-ft^2/Btu
Tensile Strength	ASTM D 3574	21 psi min.
Temperature Stability Range Short Term Long Term		– 40°C/– 40°F to 120°C/248°F – 40°C/– 40°F to 90°C/194°F
Elongation	ASTM D 3574	120% +/–20%
Compression Set	ASTM D 3574	4.2% max.
Staining and Bleeding	DIN 18 542	Meets DIN requirements
Resistance to UV and Moisture	DIN 18 542	Meets DIN requirements
Shelf Life		2+ years
Water Resistance	ASTM E 331 ASTM E 547	12.5 psf[3] 12.5 psf[3]
Fire Testing	ASTM E 84[1]	Flame Spread: 0 Smoke Developed: 5
Compatibility with conventional construction materials	DIN 52 423	No signs of corrosion were observed on zinc, steel, galvanized steel, aluminium and copper; no adverse effects with concrete, aerated concrete, brick, some natural stone, PVC, Plexiglass and wood; for other materials consult willseal
Ideal Storage Temperature		34 °C– 68 °F
Performance Guarantee		10 year warranty[2] on performance
Comprehensive Performance Test	DIN 18542	600 Pascal

1 Attachment method of Willseal 600 was in a single joint compressed to 50% of original foam thickness. Joint material was constructed of calcium silicate board and is representative of field installation of the product.

2 Due to the conditions set by Willseal, certain restrictions apply. Inquire with Willseal for details.

3. For higher driving rain resistance see Willseal 150 which provides 1000Pa versus 600 (12psf).

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UNIQUE PROPERTIES

- Driving rain tight to 12.5 psf
- Never under tension or cohesion strain
- Minimal surface prep and no priming required
- Waterbased acrylic with no fillers or VOC's
- Seal gaps or seams as small as 1/8"
- "Breathable" (vapor permeable)
- Paintable with water based paints
- Depth of seal can be changed to increase R-value and sound proofing qualities
- Can be installed under many weather and temperature conditions

COLORS

- Black/Grey (Upon Request)

DIMENSIONS

- Primary: Joint sizes from 1/8" to 1-3/4" in rolls
- Joint sizes from 1-3/4" to 8" in sticks
- Custom sizes available upon request
- For appearance reasons, Willseal 600 should be installed recessed slightly from the joint face

LIMITATIONS

- Use size chart below as a reference. For specific details or custom sizing consult with Willseal technical support
- Not for use in areas with ponding or standing water
- Not for exposure to solvents or corrosive chemicals

MATERIAL SIZING CHART

JOINT OPENING	JOINT DEPTH	LFT PER ROLL
1/8"	3/8"	32.5
1/5"-1/4"	3/4"	26
3/8"	3/4"	18
1/2"	3/4"	14
5/8"	1"	10.5
3/4"	1"	21
1"	1-1/2"	14.5
1-1/4"	2"	7.5
1-1/2"	2"	7.5
1-3/4"	2"	6

Material is supplied in 6.5LF (2M) sticks for joints larger than 1-3/4". Stick depth typically varies with joint width and increases in 1" increments. As a rule of thumb for sizes supplied in rolls (1/8"-2") overestimate total linear feet needed by at least 5% to compensate for end trimming and other waste. Full box purchases are not required, round to next full roll length.

INSTALLATION

- After measuring the joint, choose the appropriate tape size based on the joint size (see sizing chart)
- Cut off the over-compressed parts of the Willseal 600 at the beginning and end of the roll (first 2")
- Add at approximately 1/2" to the measured length and cut the Willseal 600
- For vertical joints start to work from the bottom and end the Willseal 600 in a butt joint to terminate the willseal tape to tape

SUGGESTED TOOLS

- For installation you need a tape measure, spatula/ putty knife, scissors/knife and possibly wood shims

SET-UP/EXPANSION TIME

- Material will self-expand in one direction to fill the joint depending on the storage and ambient temperature. Material will continue to expand and equalize in the joint. This can take an additional day or two depending on temperature. See the times below as a general reference.
- Approximate time to expand into the void. If exposed to direct sunlight it may be slightly faster and slower in shaded areas.

37°F (3°C) 5+ hrs
50°F (10°C) 1 hr
68°F (20°C) 10 min.
86°F (30°C) 5 min.
104°F (40°C) 1 min.

INSTALLATION TIPS: WINDOWS AND PANELS

- Do not bend or fix the tape around corners
- Tape should be installed at the corner to form a butt joint, extra pressure should be used to ensure a firm seal at termination
- During the installation of the prefabricated parts place spaces to prevent over-compression of the Willseal 600
- For horizontal joints put the PSA to the bottom side

TECHNICAL SUPPORT

- Willseal technical support can be reached to help with design, size selection and application techniques at (800) 274-2813. For additional information see willseal.com

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