



TECH DATA 25V

Product Description

- 25V is a preformed expanding foam sealant produced by impregnating permanently elastic, high-density, open-cell polyurethane foam with water-based, polymer-modified asphalt.
- Partially filling the open-cells with the impregnation and then compressing the material results in levels of sealing depending on the degree of compression.
- Typically, approximately 4-times compression is required for weathertightness in applications in the vertical plane.
- 25V is packaged precompressed in reels with adhesive backing or, depending on size, in shrink-wrapped lengths (sticks). See table 2.
- It is supplied precompressed to less than the nominal material size for easy insertion into the joint.
- Sealing between the foam and substrate is achieved through a combination of the pressure-sensitive adhesive impregnation and the backpressure of the expanding foam.

Uses and Applications

- As a weather, moisture, vapor, air, sound and dust seal in static or expansion/contraction joints in walls.
- Generally used as a primary seal, 25V is installed flush or slightly recessed from wall surface.
- 25V can be used as a secondary seal behind a backer rod (or bond breaker tape) and caulking. However Backerseal from EMSEAL is specifically designed for this application.
- Suitable for use in substrates of brick, CMU, precast and cast-in-place concrete, wood, stone and most construction materials. (For suitability to a particular substrate, consult EMSEAL.)
- Used extensively for sealing vertical abutment joints between buildings, brick and CMU control joints, joints in tilt-up panels, etc.
- 25V is an effective anti-vibration and acoustic seal. It is used in many specialty applications where sealing, weatherproofing, vibration absorption and thermal insulation are of importance; ex: automotive industry, metal buildings and metal roofing, modular construction, log homes, ventilation ducting, etc. (Consult EMSEAL for specialty applications.)

Advantages

- Durable primary seal
- Permanently elastic and weather-tight
- Follows joint contours
- Difficult to vandalize
- Backpressure of foam maintains seal, minimizes tension on substrate and reduces possibility of failure due to weak or improperly prepared substrates
- Exposed face remains flat regardless of variation and changes in joint width and compression

- Easy to install – no masking, mixing, priming, tooling, curing or clean-up required
- Polyester scrim embedded in self-adhesive resists stretching of material during installation
- Good thermal and sound insulating properties
- Vermin proof

Limitations

- 25V will not adhere to joints that are dirty or dust-covered or to surfaces coated with oils or release agents.
- 25V service temperature range is -40°F to 185°F (-40°C to 85°C).
- 25V is not resistant to sustained contact with petroleum solvents, oils, selected waxes, active chlorine, heavy oxidized acids or strong lyes.

Joint Seal Characteristics

- The joint-sealing capabilities — weathertight, acoustic, thermal, dust, etc. — of 25V are determined by the degree of compression of the material. Consult EMSEAL.

Table 1: Typical Physical Properties of 25V

Property / Test	Value	Test Method
Base Material	Open Cell, High Density, Polyurethane Foam	N/A
Impregnation	Polymer-modified asphalt	N/A
Color	Black	N/A
Density (uncompressed)	9-10 lb/ft ³ (144-160 kg/m ³)	
Density (compressed to 25% of uncompressed width)	36-40 Lb/Ft ³ (576-640Kg/M ³)	
Tensile strength	21 psi min (145 kPa)	ASTM D3574
Elongation - ultimate	150% min	ASTM D3574
Temperature range		
High – permanent	185°F (85°C)	
High – short term	203°F (95°C)	
Low	-40°F (-40°C)	
Softening point	140°F MIN (60°C)	ASTM D816
UV resistance	Excellent	
Mildew resistance	Excellent	
Resistance to aging	Excellent	
Bleeding	None	
-40°F TO 180°F (-40°C TO 85°C)		
Compression set 70°C 50% RH after 72 hrs.	3% max	ASTM D3574
Thermal conductivity	0.34 BTU. In/hr. Ft ² .°F (0.05 W/m. °C)	ASTM C518
Low temperature flexibility 32°F to -10°F (0°C to -23°C)	No cracking or splitting	ASTM C711
Water vapor transmission At 25% compression	0.011 perms	ASTM C355-64

- Above-grade wall applications generally require compression to approximately 25% of original uncompressed dimension (i.e. 4-times compression).
- Table 1 gives the physical properties of 25V.
- Table 2 illustrates standard sizing of 25V.
- 25V is rated for joint movement of +25%, -25% (total 50%) of nominal material width.
- Compression to 33% of original uncompressed size will provide acoustic air and dust sealing.
- For horizontal deck and below-grade applications such as parking decks, perimeter joints, curbs, sidewalks, foundation walls, etc. -see data sheet for DSM (coated) and 20H (uncoated) from EMSEAL.

Joint Design

- Substrate faces must be parallel and have sufficient clear depth to fully support 25V.
- Substrate must be capable of resisting, without deflection, approximately 2.5 lb/in² (17 kPa) back-pressure from the 25V.

Installation

- **Surface Preparation:** Joint surfaces must be free from gross irregularities, loose particles, foreign matter such as dirt, dust, ice, snow, water, etc., and coatings such as grease, oil, release agents, lacquers, etc., that may be detrimental to the adhesion of the sealant.
- 25V should be stored indoors at room temperature. Recovery is quicker when warm and slower when cold
- Remove 25V from protective packaging.
- Expose self-adhesive side by removing release liner.
- Insert material into the joint and secure adhesive face against joint side using putty knife. Material will then expand to fill the joint. (At cooler temperatures recovery can be accelerated by heating.)
- Join consecutive lengths of material with a 45° miter.

Install in accordance with fully detailed installation instructions which accompany each order. These are also available separately from EMSEAL.

Table 2: 25V Sizing

Nominal Material Size (Joint Size at Mean T°)		Depth of Seal	
Reels			
1/4"	(6mm)	3/4"	(20mm)
3/8"	(10mm)	3/4"	(20mm)
1/2"	(12mm)	3/4"	(20mm)
5/8"	(15mm)	1"	(25mm)
3/4"	(20mm)	1"	(25mm)
1"	(25mm)	1-1/2"	(40mm)
Sticks			
1-1/4"	(30mm)	2"	(50mm)
1-1/2"	(40mm)	2"	(50mm)
1-3/4"	(45mm)	2"	(50mm)
2"	(50mm)	2-1/2"	(60mm)
2-1/4"	(55mm)	2-1/2"	(60mm)
2-1/2"	(60mm)	2-3/4"	(70mm)
2-3/4"	(70mm)	3"	(75mm)
3"	(75mm)	3"	(75mm)
3-1/4"	(80mm)	3-1/2"	(90mm)
3-1/2"	(90mm)	3-1/2"	(90mm)
3-3/4"	(95mm)	4"	(100mm)
4"	(100mm)	4"	(100mm)

CAD & Guide Specs

Guide specifications and CAD details are available online at emseal.com or by contacting EMSEAL.

Warranty

Standard or project-specific warranties are available from EMSEAL on request.

Availability & Price

EMSEAL products are available throughout the United States and Canada. Prices are available from local representatives or direct from the manufacturer. The product range is continually being updated, and accordingly EMSEAL reserves the right to modify or withdraw any product without prior notice.