



AST™ SEALANT TAPES

TECH DATA

Manufacturer

EMSEAL JOINT SYSTEMS, LTD.
25 Bridle Lane
Westborough, MA 01581-2603

EMSEAL, LLC
120 Carrier Drive
Toronto, ON, Canada M9W 5R1

TOLL FREE: 1-800-526-8365 PH: 508-836-0280 FX: 508-836-0281

Product Description

- **AST** is a preformed, elastic, self-adhesive expanding tape seal. It is made of a resilient open-cell polyurethane expanding foam that has been impregnated with a water-based acrylic-modified asphalt emulsion. It is then factory pre-compressed and packaged in reel form with self-adhesive backing.
- Sealing ability is largely a result of the foam's cell structure, the nature and level of impregnation, and the degree of compression to which the foam is subjected after installation.
- Compression levels required for sealing vary according to application:
 - greater compression for run-off water
 - lower compression for dust, driving snow, etc.
- **AST** is packaged precompressed in reels with adhesive backing. After removal of packaging, material begins gradual expansion--slower in cold weather, faster in hot.
- It is supplied precompressed to less than the nominal material size for easy insertion into a preformed joint of the same opening width.
- Sealing between the foam and joint surfaces is achieved through a combination of the pressure-sensitive adhesive impregnation and the back pressure of the expanding foam.

Uses, Applications

- As a water, vapor, air, sound and dust seal in expansion/contraction joints or in static gasket-type joints such as sills or mechanically fastened joints.
- Suitable for use between metal surfaces in metal buildings, as well as in premanufactured concrete buildings and concrete equipment shelters.
- Generally used as a primary seal, **AST** is installed flush with or slightly recessed:

- into preformed openings, or
- as a gasket tightly squeezed between metal or other joint faces.

- **AST** is an effective anti-vibration and acoustic seal. It is used in many applications where sealing and weather-proofing, as well as vibration absorption and thermal insulation are of importance; ex: automotive industry, modular construction, log homes, ventilation ducting, etc.

TABLE 1: Typical Physical Properties of AST

Property	Value	Test Method
BASE MATERIAL	OPEN CELL, HIGH DENSITY, POLY-URETHANE FOAM	N/A
Impregnation	Polymer-modified asphalt	N/A
COLOR	BLACK	N/A
Tensile strength	21 psi min (145 kPa)	
ELONGATION - ULTIMATE	150% MIN	
Temperature range		
High - permanent	185°F (85°C)	ASTM D3574
High - short term	203°F (95°C)	ASTM D3574
Low	-40°F (-40°C)	ASTM C711
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	3% max	ASTM D3574
70°C 50% RH after 72 hrs.		
THERMAL CONDUCTIVITY	0.34 BTU. IN/HR. FT ² . °F (0.05 W/M. °C)	ASTM C518
Low temperature flexibility	No cracking or splitting	ASTM C711
32°F to -10°F (0°C to -23°C)		
WATER VAPOR TRANSMISSION AT 25% COMPRESSION	0.011 PERMS	ASTM C355-64

Advantages

- Durable primary seal.
- Permanently elastic and weather-tight.
- Follows joint contours.
- Difficult to vandalize.
- Back pressure of foam maintains seal in larger joints subject to thermal expansion and contraction. Also highly suitable as a relatively non-moving gasket-type 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 resistant.

Limitations

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

Joint Seal Characteristics

- Table 1 gives the physical properties of AST.
- Table 2 illustrates standard sizing of AST.

Joint Design

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

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.

- AST should be stored indoors at room temperature. Recovery is quicker when warm and slower when cold.
- Remove AST from protective packaging.
- Expose self-adhesive side by removing release liner.
- Join consecutive lengths of material with a 45° miter.

Warranty

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

Availability and Price

EMSEAL products are available internationally. The product range is continually being updated, and EMSEAL reserves the right to modify or withdraw any product without prior notice.

TABLE 2: Standard Sizes

The following are the most popular sizes, but material of virtually any size can be provided to suit your specific requirements.

AST Hi-Acrylic

Supplied Size	Expanded Size	Box Quantity	Rolls Per Box	Roll Length	Product Code
3/32 x 3/8" (2 x 10mm)	3/8 x 3/8" (10 x 10mm)	1968' (600 m)	60	32.80' (10 m)	ASH-10-10-10
1/8 x 1/2" (3 x 12mm)	1/2 X 1/2" (12 x 12mm)	1640' (500m)	50	32.80' (6m)	ASH-12-12-10
5/32 x 5/8" (4 x 15mm)	5/8 X 5/8" (15 x 15mm)	1049.60' (320m)	40	26.24' (8m)	ASH-15-15-08
3/16 x 3/4" (5 x 20mm)	3/4 x 3/4" (20 x 20mm)	629.76' (192m)	32	19.68' (6m)	ASH-20-20-06
1/4 x 1" (6 x 25mm)	1" x 1" (25 x 25mm)	511.68 LF (156 m)	26	19.68' (6 m)	ASH-25-25-06
5/16 x 3/4" (8 x 20mm)	1 1/4 x 3/4" (30 x 20mm)	419.84 (128m)	32	13.12' (4m)	ASH-30-20-06
3/8 x 1" (10 x 25mm)	1 1/2 x 1" (40 x 25mm)	314.88' (96m)	24	13.12' (4m)	ASH-40-25-04
3/4 x 1" (20 x 25mm)	3 x 1" (75 x 25mm)	131.20' (40m)	20	6.56' (2m)	ASH-75-25-02

For technical service, samples, and pricing contact:

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