

## Manufactured Housing: SEALING THE MARRIAGE LINE with AST

### Contact:

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### Why Seal The Marriage Line?

The marriage line between the two halves of double-wide manufactured homes can be the point through which drafts, cold, heat, and vapor can pass, thereby significantly affecting the energy efficiency of the home.

Despite the finest quality control measures in the factory, a natural dimension-tolerance buildup caused by transportation, drying and shrinkage of lumber, and un-level sites or foundations is inevitable.

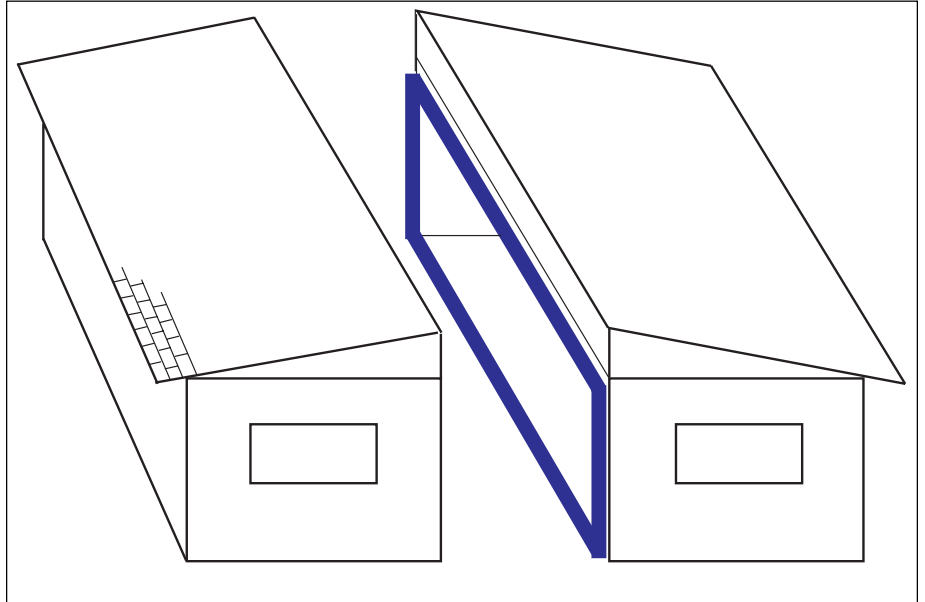
The result is a varying gap between the face-plates of the marriage line even after the double-wide is bolted together.

The fact that this gap occurs is proved by the widespread use of fiberglass insulation in an attempt to fill it.

AST provides a far more efficient and effective solution for sealing the marriage line.

### What is AST?

- AST is a preformed expanding foam sealant produced by impregnating permanently elastic, high-density, open-cell polyurethane foam with water-based, acrylic-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.
- AST is packaged pre-compressed to about 1/4 of its fully expanded size in reels with adhesive backing. See table 2.
- The stored strain-energy of compression in the AST means continuous backpressure is exerted against the face-plates thereby maintaining long-term sealing contact.



### About AST, Willis Franklin, Sr. of Setac Mobile Homes, Vidor, TX says:

#### Value:

*"It not only seals the marriage line and improves the R-Value of the home, but my labor savings on installation are dramatic--about one-third the cost of fussing with big rolls of fiberglass on messy jobsites. This product adds so much value to the home and the installation that we make it a standard item on all double-wide set-ups."*

#### Labor Savings:

*"I can have one guy attach EMSEAL tape to the entire marriage line quicker than another guy can get a roll of pink stuff off the back of his truck measure it, then cut it into strips."*

#### Function:

*"Our primary concern in Vidor is keeping air conditioning in and Texas heat out. With an EMSEAL marriage line, we can be sure this is achieved. Pink fiberglass is not only difficult to work with but its R-value drops drastically when wet and compressed."*

#### Installation Method:

*"We apply the tape to the stationary-side face-plates when the two units are about 12 - 18 inches apart. It takes us about 30 minutes to get the other unit up against the stationary unit and bolted in. The gradual expansion of the EMSEAL gives the guys plenty of working time and ensures that variations and voids are filled."*

### Manufacturers & Dealers

Your reputation is your most valuable asset. For this reason, you apply the strictest quality assurance standards in your factories. You address every detail right down to the sealing of windows and even the smallest vents.

The only sealing detail you don't control is the marriage line.

By shipping AST with each double-wide, owners of your homes can be assured of a properly sealed home.

At the same time, you will create a preference for your homes with set-up crews who won't have to shop for fiberglass to treat the marriage line.

### Set-Up Crews

If the manufacturer or dealer doesn't ship AST with its homes, you can buy it direct from us and provide your crews with a labor-saving alternative to fiberglass insulation?

On average, it takes about 35 minutes to cut, fit and staple pink insulation around the marriage line. And that's after you've sent a worker to buy the insulation and set up a clean, dry cutting surface on which to work.

AST is pre-cut, precompressed, self-adhering, and in short USER-FRIENDLY.

### Advantages

- Excellent thermal and sound insulating properties
- Asphalt impregnation resists bugs and other vermin
- Backpressure of foam maintains seal
- Exposed face remains flat regardless of variation and changes in joint width and compression
- Easy to install - no slitting, stapling, masking, mixing, priming, tooling, curing or clean-up required
- Polyester scrim embedded in self-adhesive resists stretching of material during installation

### Installation

- Surface Preparation: 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.
- Press adhesive side of AST against face plate of stationary unit. Bring other unit up to stationary unit thereby recompressing the AST.
- Bolt units together and complete set-up.

**TABLE 1: Typical Physical Properties of AST**

Property	Value	Test Method
BASE MATERIAL	OPEN CELL, HIGH DENSITY, POLYURETHANE FOAM	N/A
<b>Impregnation</b>	<b>Polymer-modified asphalt</b>	<b>N/A</b>
COLOR	BLACK	N/A
<b>Density (uncompressed)</b>	<b>9-10 lb/ft<sup>3</sup> (144-160 kg/m<sup>3</sup>)</b>	
DENSITY (COMPRESSED TO 25% OF UNCOMPRESSED WIDTH)	36-40 LB/FT <sup>3</sup> (576-640KG/M <sup>3</sup> )	
<b>Tensile strength</b>	<b>21 psi min (145 kPa)</b>	<b>ASTM D3574</b>
ELONGATION - ULTIMATE	150% MIN	ASTM D3574
<b>Temperature range</b>		<b>ASTM C711</b>
<b>High - permanent</b>	<b>185°F (85°C)</b>	
<b>High - short term</b>	<b>203°F (95°C)</b>	
<b>Low</b>	<b>-40°F (-40°C)</b>	
SOFTENING POINT	140°F MIN (60°C)	ASTM D816
<b>UV resistance</b>	<b>Excellent</b>	
MILDEW RESISTANCE	EXCELLENT	
<b>Resistance to aging</b>	<b>Excellent</b>	
BLEEDING	NONE	
-40°F TO 180°F (-40°C TO 85°C)		
<b>Compression set</b>	<b>3% max</b>	<b>ASTM D3574</b>
<b>70°C 50% RH after 72 hrs.</b>		
THERMAL CONDUCTIVITY	0.34 BTU. IN/HR. FT <sup>2</sup> . °F (0.05 W/M. °C)	ASTM C518
<b>Low temperature flexibility</b>	<b>No cracking or splitting</b>	<b>ASTM C711</b>
<b>32°F to -10°F (0°C to -23°C)</b>		
WATER VAPOR TRANSMISSION AT 25% COMPRESSION	0.011 PERMS	ASTM C355-64

**TABLE 2: Sizing**

Using the charts below choose the nominal size of seal needed to give the level of sealing you require.

#### Level of Sealing

- 1-No Seal (material needs some compression to stay in joint)
- 2-Heat & Cold, Dust, Acoustic
- 3-Heat & Cold, Dust, Acoustic, Air
- 4-Heat & Cold, Dust, Acoustic, Air, Vapor
- 5-Heat & Cold, Dust, Acoustic, Air, Vapor, Water

Zero Compression (fully expanded)	
*18%	82%
*66% compression	33%
*75% compression	25%
*80% compression	20%

\*compression from fully expanded size

Product Code	Nominal Material Size	Depth of Seal	Fully Expanded Size (zero compression)	Max. Allowable Joint-Gap for #2 Seal Level
AST2520	1/4" (6mm)	3/4" (20mm)	1" (25mm)	3/4" (20mm)
<b>AST3020</b>	<b>5/16" (8mm)</b>	<b>3/4" (20mm)</b>	<b>1 1/4" (30mm)</b>	<b>1" (25mm)</b>
AST3520	3/8" (10mm)	3/4" (20mm)	1 3/8" (35mm)	1 1/4" (30mm)
AST4525	1/2" (12mm)	1" (25mm)	1 3/4" (45mm)	1 1/2" (35mm)

For larger sizes consult EMSEAL.

#### NOTES:

- Material up to 5/8" (15mm) is supplied in 13.12 LF (4M) reels; 3/4" (20mm) in 6.56 LF (2M) reels

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