



# FOAMSEAL TECHNICAL BULLETIN #1

New: 04/2008

## Foamseal® Hurricane Adhesive and Closed Cell Spray Foam

<p><b><i>What is the difference between Foamseal Hurricane Adhesive and closed cell spray foam?</i></b></p>	<ul style="list-style-type: none"> <li>• Both are closed cell polyurethane foams</li> <li>• Foamseal was formulated for uplift resistance and to provide a secondary water barrier</li> <li>• Closed cell spray foam was formulated for insulation</li> <li>• Foamseal is 25 – 50% denser<sup>1</sup> than closed cell spray foam</li> </ul>
<p><b><i>How are they applied?</i></b></p>	<ul style="list-style-type: none"> <li>• Foamseal is applied as a fillet at the sheathing truss joint and as a thin film at the sheathing seams</li> <li>• Spray foam is applied to a thickness of 2-4 inches in the roof truss cavity</li> </ul>
<p><b><i>Has Foamseal been tested?</i></b></p>	<ul style="list-style-type: none"> <li>• Foamseal is patented for uplift resistance<sup>2</sup> when applied as a fillet to the sheathing-truss joint</li> <li>• Foamseal improves uplift resistance by 2-4 times over nails alone<sup>3</sup></li> <li>• Foamseal has been shown to be a highly effective secondary water barrier</li> </ul>
<p><b><i>Why wouldn't I use closed cell spray foam for both insulation as well as for uplift resistance and as a secondary water barrier?</i></b></p>	<ul style="list-style-type: none"> <li>• For a typical 2000 sq ft roof, expect to pay \$3.00 – 4.00/sq ft for closed cell spray foam applied at 3 inches and \$1.50 – 2.00/sq ft for Foamseal</li> <li>• The Asphalt Roofing Manufacturers Association (ARMA) does not recommend insulation applied to the underside of a nailable roof deck because of proper ventilation and shingle life concerns<sup>4</sup></li> <li>• One major shingle supplier points out that spray foam insulation applied to the underside of the roof deck may lead to premature shingle life, condensation problems, mold growth, deck deterioration and structural damage if adequate ventilation is not provided and other shingle suppliers exclude shingle warranty coverage for inadequate ventilation<sup>5</sup></li> <li>• Foamseal is applied as a fillet at the sheathing-truss joint and as a thin film at the sheathing joints does not affect ventilation</li> </ul>
<p><b><i>Are there environmental concerns with the use of Foamseal or closed cell spray foam?</i></b></p>	<ul style="list-style-type: none"> <li>• Foamseal is all water blown</li> <li>• Closed cell foam is co-blown with water and an EPA approved blowing agent</li> <li>• Closed cell foam will generate over 350 times more VOC's than Foamseal<sup>6</sup></li> <li>• VOC's (Volatile Organic Compounds) contribute to the generation of smog</li> </ul>

<sup>1</sup> Foamseal Hurricane Adhesive has a density of 2.5 – 2.9 PCF (lbs per cubic foot). A typical spray foam has a density of 1.7 – 2.0 PCF.

<sup>2</sup> US Patent No 5,890,327 issued April 6, 1999 *Method of Reinforcing the Roof of a Building against Hurricane-Force Winds*

<sup>3</sup> Clemson University Civil Engineering Report entitled *Retrofit Techniques Using Adhesives to Resist Uplift in Wood Roofing Systems*

<sup>4</sup> Asphalt Roofing Manufacturers Association Technical Bulletin 209-RR-86 *Ventilation and Moisture Control for Residential Roofing* and Technical Bulletin 211-RR-94 *Application of Asphalt Shingles Over Insulation or Insulated Decks*

<sup>5</sup> Tamko Building Products Warranty, Owens Corning Warranty and GAF Technical Point No: 135-07 dated 10/1/07

<sup>6</sup> Using EPA Method 24, the calculated VOC emissions from Foamseal Hurricane Adhesive are 0.04%/lb while the typical closed cell spray foam is 3-4%/lb.

**EXAMPLE:**

2000 sq ft roof:

**Foamseal** usage 250 lbs; 250 lbs x 0.0004/lb (VOC) = **0.1 lb VOC**

**2 PCF closed cell spray foam** applied at 3 inches with a waste factor of 5%  
2000 ft<sup>2</sup> x 2 lb/ft<sup>3</sup> x 0.25 ft (thickness) x 1.05 (waste factor) x 0.035/lb (VOC)  
= **36.75 lbs VOC**