

SPRAY POLYURETHANE FOAM (SPF)  
**FOR ROOFING**

When it comes to the roof over your head,  
discover why you can count on SPF.



# DURABLE BY DESIGN

With a lifecycle performance that can exceed 30 years, SPF roofing systems offer quality that's built to last. From high winds, rain, snow and hail to corrosion and foot traffic, SPF's unique application process and adhesion properties help deliver long-term, high-performance results.<sup>1</sup>

SPF roofing systems are referred to as "self-flashing" because when properly applied, the durable foam conforms and adheres to a variety of shapes and substrates, forming a seamless, monolithic barrier.<sup>3</sup>

## What does that mean for the roof over your head?

- 1. Reduced ponding:** SPF accommodates unique roof designs and can be applied in various thicknesses to create a positive slope and improve drainage on flat roofs.
- 2. Reduced leakage:** SPF offers coverage around seams, penetrations, parapet walls, HVAC curves, vents and skylights – helping avoid water-leakage problems.

Research by the National Roofing Foundation on SPF roofing systems in six different climate zones in the United States showed the physical properties of the foam change very little with age.<sup>2</sup>

# A BETTER SOLUTION

Roofs made with SPF can provide long-term quality, while also helping the environment by reducing resource expenditures and minimizing the use of landfill capacity. SPF roofs are energy efficient, minimizing the environmental impact of buildings.

## Reroof, Recycle and Reduce

When considering a roof, it is inevitable to think about the repair process if it is damaged. SPF roofs do not typically have to be removed during repair, unlike many other materials. Once the damage is identified, the area can usually be re-foamed without ever having to remove the roof.

Tearing off roofs and replacing them completely is not only resource intensive, but it can also increase construction waste in landfills. Fortunately, in addition to offering an excellent choice for new construction, SPF can also be applied to most existing roofs without the need for tear-off, which extends a roof's life. These attributes simplify repairs, reduce waste in landfills and reduce repair time compared to some other replacement techniques.

\*Calculation courtesy of SWD Urethane<sup>5</sup>

Construction Waste for a 40,000 sq ft Roof Over 30 Years*			
			
Built-Up Roof With Gravel Ballast	Built-Up Roof With Cap Sheet	Single Ply Roofing System Fully Adhered	Spray Foam Roofing System
360,800 lbs	176,800 lbs	70,000 lbs	55 lbs

\*Assumes traditional roof tear-off at end of typical system lifespan.

# ENERGY EFFICIENCY

SPF roofs provide an insulating barrier for homes and buildings. SPF roofs can significantly reduce air leakage and heat transfer, saving energy otherwise used to heat and cool buildings and thus decreasing greenhouse gas emissions. SPF's insulating properties make it one of the highest performers among any roofing materials.

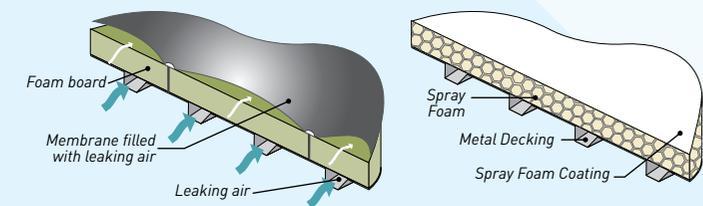
Additionally, "cool roofs" made with SPF reflect the sun's energy to mitigate urban heat island effects and keep buildings cool.<sup>6</sup> Cool roofs help to minimize the effects of climate change because they reduce energy use and therefore power-plant emissions, and they decrease the heat trapped in the atmosphere by reflecting more sunlight back into space.

## Resisting Wind Uplift

SPF roofing systems offer exceptional wind resistance because their application method reduces need for fasteners, battens, strips or heavy ballast.

**SPF Advantage:** SPF's seamless and fluid application method helps the material grip and protect the roof deck, and minimize gaps and edges for wind to get trapped beneath causing structural flaws.

In one study by a researcher at the University of Florida, a roof deck insulated with closed-cell SPF demonstrated an ability to withstand wind speeds found in category 4 hurricanes (130-156 mph).<sup>4</sup>



# SPF ROOFING SYSTEM



## Long-term Savings

SPF roofing systems deliver energy efficiency and maintenance savings year after year, which helps offset initial investment. Moreover energy-efficiency tax credits or other incentives may also be available for your project, making the use of SPF even more attractive.

## Professional Installation

Trained, professional SPF installers can help you select the right product and communicate the necessary safety precautions. The SPF industry trains professionals on the proper installation techniques, and third-party organizations like the Spray Polyurethane Foam Alliance offer installer certification programs.<sup>10</sup> When professional installation is needed, ask your SPF contractor about his or her training and certification credentials for more informed decision-making.

## Safety First

The versatility and unique performance attributes of SPF products are created onsite. SPF is applied as a liquid that quickly expands to form a cured foam insulation. Projects of many sizes and types can benefit from SPF. Installation practices and requirements can vary depending on the project type and SPF product used. Always consult with a knowledgeable authority or SPF professional to understand responsible installation practices for your project.

## Endnotes

1. *Buildings* "Specifying SPF roofing systems," September 2005 <https://www.buildings.com/article-details/articleid/2753/title/specifying-spf-roofing-systems>
2. *Buildings* "Specifying SPF roofing systems," September 2005 <https://www.buildings.com/article-details/articleid/2753/title/specifying-spf-roofing-systems>
3. <http://sprayfoam.com/content/spray-foam-roofing-guide/15>
4. A 2007 study conducted by Dr. David Prevatt at the University of Florida's Department of Civil and Coastal Engineering examined closed-cell SPF's ability to increase the structural integrity of roof assemblies in high wind events like hurricanes.
5. *Calculation courtesy of SWD Urethane*
6. <http://sprayfoam.com/content/spray-foam-roofing-guide/15>
7. *Del E. Webb School of Construction at Arizona State University*
8. <http://coolroofs.org/>
9. <http://www.sprayfoam.org/certification>
10. *The SPF industry maintains an extensive library of products stewardship information and helpful practices for the safe handling and use of products. Visit [www.spraypolyurethane.org](http://www.spraypolyurethane.org) for more information.*



Spray Foam Coalition

The SFC Code of Conduct is annual commitment signed by members of the Spray Foam Coalition that manufacture SPF systems. The Code of Conduct provides a framework to drive continuous improvement in health and safety and product stewardship.

**For more information, visit:**  
<https://polyurethane.americanchemistry.com/Spray-Foam-Coalition>