Sprayed Polyurethane Foam

Sprayed Polyurethane Foam, also known as "SPF", is a closed cell roofing and insulation material that is rapidly gaining market share in today's construction industry.

Because it is sprayed on, it forms a seamless, monolithic barrier that prevents air and water infiltration. SPF systems are referred to as "self flashing" because they can be applied to vertical surfaces such as parapet walls and roof penetrations in a contiguous manner, thus eliminating seams and cold joints, the main source of roof leaks.

The roofing systems can be applied quickly and safely, without disruption to the facilities. What's nice about SPF systems is that in most reroofing applications there is no need to tear off existing membranes, offering cost and logistic advantages.

Below are some of the advantages of an SPF roofing system

- **Seamless** - SPF forms a seamless insulated roofing system. Whether a roof is 10,000 sq. ft., 100,000 sq. ft or larger in size, it will have no seams.
- **Eliminates Flashing Leaks** - SPF is ideal for flashing parapet walls, roof penetrations and roof mounted equipment, including vents, pipes, stacks, HVAC equipment, skylights, and cooling towers.
- **Elimination of Ponding Water** - In reroofing applications, ponding water may be eliminated by adding an increased thickness of polyurethane foam in low areas. Building up the low areas and sloping the roof so that it drains properly will eliminate ponding water.
- **Lightweight** - SPF weighs between 2-3 pounds per cubic foot. One inch of polyurethane foam insulation plus 30 mils of an elastomeric coating weighs approximately 60 pounds per 100 sq. ft., as compared to approximately 600 pounds per 100 sq. ft. for a typical conventional four-ply built-up roofing system.
- **Highest "R" Value** - SPF has an "R" value of 7.14 per inch, enabling it to provide more thermal resistance with less material than any other insulation.
- **Versatility** - It can be used on both new and replacement roofs, whether flat, pitched, saw-toothed, domed or having unusual slopes or configurations. It is also ideal for the spray application to tanks, freezers, coolers, piping, ductwork and various aerospace projects.
- **Flexibility** - It has the ability to withstand a structure's normal expansion and contraction without affecting the ability to keep the structure protected from the outside elements.
- **Water & Air Tight** - The closed cell structure of polyurethane foam resists the penetration of water and air. It is a US Coastguard approved material for flotation.
- **Maintenance** - A Maintenance Agreement is available to our customers. In addition, after a brief instructional meeting, in-house maintenance personnel can make minor repairs at minimal cost using a hand caulking gun and urethane sealant.

- **Lowers Surface Temperature** - The white elastomeric coating used to protect the polyurethane foam from UV rays adds the benefit of lowering the surface temperature of the roof from 200 degrees on a typical black rubber roof on a 90 degree day to 120 degrees for the SPF roof. The white coating is very reflective and helps lower energy costs to the building owner.
- **Strength** - While very lightweight, polyurethane foam is strong. It will not pack down or sag.
- **Long Life** - SPF roofing systems are renewable. While other systems need to be removed and replaced after their usual life expectancy, SPF need only be repaired and recoated with the elastomeric coating system for many years of service.
- **Ease of Application** - A SPF roofing system can be installed in a relatively short period of time with little or no disruption of building operations.

Texas A&M University

17 years ago, Texas A & M University began re-roofing their facilities using SPF. They kept careful records on the performance of their new roofing system and found they have reaped reductions in maintenance costs as well as decreased energy expenses. Below are the results of the study performed by Gerald Scott, Director of Energy, Texas A & M University.

Year	No. of Bldgs.	Roof SF	Construction Cost	Annual Energy Savings	Payback (Discounted)
1980	7	61,563	$164,214	$76,055	2 1/3 yr.
1981	4	75,670	184,304	16,532	7 1/2 yr.
1982	3	44,280	126,400	31,144	3 1/3 yr.
1983	8	163,516	414,135	74,048	4 1/2 yr.
1984	5	248,500	805,346	129,681	4 1/2 yr.
Total	27	593,529	$1,694,399	$327,460	4 1/2 yr.