

Spray Foam Roofs



INSULATED ROOF SYSTEM
Spray Polyurethane Foam (SPF) Roofing

COATED ROOF SYSTEM
Silicone Restoration Membrane (SRM)

ELIMINATE DRAINAGE PROBLEMS
Build-up low puddling areas with foam

PROVIDES ALL PROTECTION
Air Barrier, Vapor Barrier & Water Barrier

SYSTEM WARRANTIES AVAILABLE
10, 15 & 20 Year Full Warranties

ELIMINATE EXISTING ROOF DEMO
Applied directly to EPDM, PVC, TPO, Metal,
Wood, Concrete and Built-up Roofs (BUR)

APEX ROOFING COATED ROOF SYSTEMS

APEX Building Company offers an innovative and green approach to protection on the exterior roof. We install roof systems so unique that no other roofing has matched the efficiency, performance or sustainability in the last 60 years. **SPRAY POLYURETHANE FOAM (SPF) ROOFING is a lifetime air barrier eliminating current roof problems.**



SPF Roofing is green, solar reflective, and seamless. It provides wind uplift protection and energy savings for life.

Owners need to focus attention on the details that matter the most as energy prices increase the cost of operating facilities. APEX has designed a unique roof program to fit the budgets of every facility yet sustainable to save customers enough money in energy to pay for the roof system several times during the life cycle of the building. Our seamless system is a risk-free guarantee to building owners. Increased structural strength, estimated energy savings and lifetime maintenance plan are all part of the APEX program. SPF roofing is an Energy Star cool roof that uses the best materials available to provide the longest lasting roof available on the market based on expert analysis.



DEVELOPING A BETTER ROOF

Surveys conducted by Dr. Dean Kashiwagi of the Del E. Web School of Construction at Arizona State University and Dr. Rene Dupuis of the National Roofing Foundation revealed that SPF shows little sign of deterioration even after 30 years. Dr. Kashiwagi is the pioneer of the "Performance Based Procurement System" for buying best performing services/facility systems. Between 1983 and 1996, he surveyed the performance of more than 1,600 SPF roofs, which 97.6% did not leak and 93% had less than 1% deterioration while 55% of those roofs were never maintained.

In the most comprehensive roof survey ever performed by the National Roofing Foundation, Dr. Dupuis evaluated 160 SPF roofs. Dr. Dupuis concluded that SPF roofing systems appear to have a very high degree of sustainability with an indefinite life expectancy when properly maintained with periodic recoating. More than 70% of the roofs were applied over existing roofs. These findings indicate a properly maintained SPF Foam Roof can be expected to last the lifetime of the property.

APEX SPF Roofing Program

DESIGNING THE BEST ROOF

SPF Roof as New Roof System

SPF Roofs are widely used for many specific design benefits including the following:

- Lightweight roofing materials needed
- Roof area subject to extreme high winds
- Roof has strange design (dome structure)
- Severe temperature on roof (solar panels)
- Heating & cooling costs need reduction

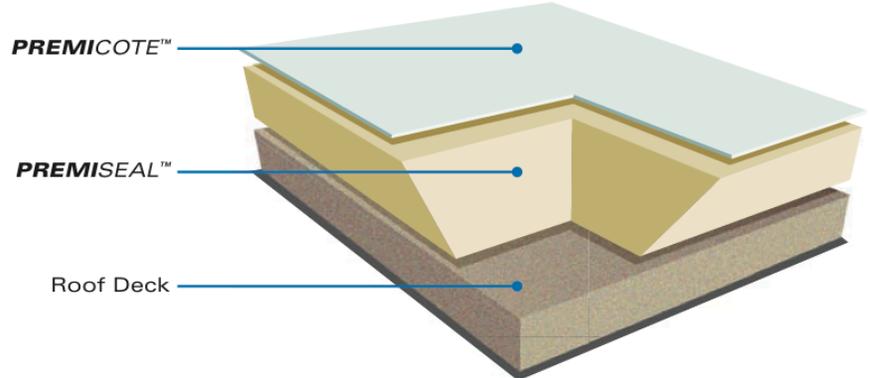
A monolithic Foam roof can prevent moisture vapor transmission or be used to improve the appearance or aesthetics of a roof. Lightweight SPF foam can also relieve structural stress replacing heavy substrates such as tar & gravel or ballast roof systems.

SPF Roof over Existing Roof System

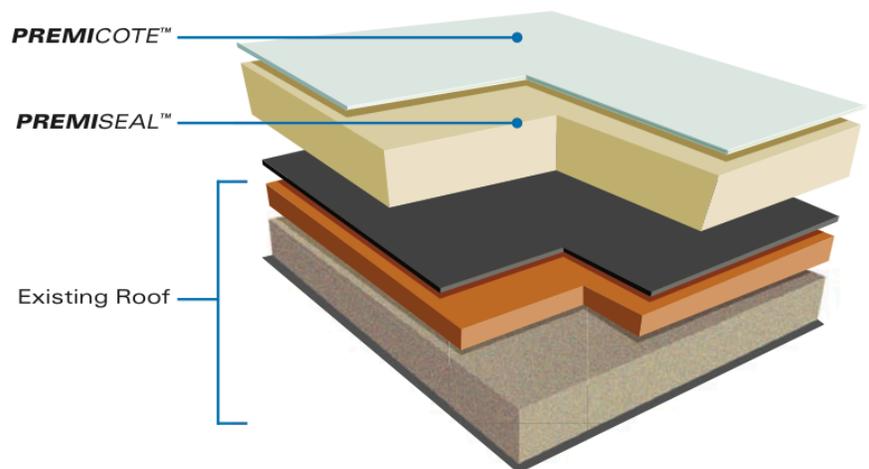
SPF Roofs eliminate ponding and drainage problems that need correction. They eliminate existing leaks and provide a perfect roof when existing insulation is insufficient. Applying the foam roof directly to the existing roof helps save the old roof and divert the waste from the landfill.

SPF Foam Roof Systems adhere well to most flat or low slope roofing substrates including metal, wood, concrete and BUR. Foam is extremely lightweight and can often be applied over an existing roof system, after the existing system has been properly prepared. In some cases, a professional inspection reveals an existing roof covering must be torn off before an SPF roofing system may be applied.

Installation Directly to Substrate



Installation Over Existing Roof



SPRAY FOAM ROOFS

If your roof surface is flat or has only a slight pitch, there are several benefits to using Spray Polyurethane Foam. Foam roofs are very durable and last substantially longer than most other types of roofing, but they must be maintained (see maintenance schedule below). Polyurethane foam is an excellent insulator. It meets and exceeds building code requirements, and is a form of energy efficient green construction.

A Spray Polyurethane Foam (SPF) roofing system consists of two heated liquid components which are combined and sprayed onto a prepared surface. The mixture instantly bonds to the substrate surface and expands to form a rigid foam closed cell structure. The two heated components expand to many times their original size, which can be used to alter the roof slope, build up low areas, or improve drainage. Within a few minutes, the sprayed foam hardens to form a durable lightweight monolithic waterproofing barrier. Generally, foam is sprayed to a depth of 1" to 1.5" inches.

“Dr Kashiwagi surveyed the performance of more than 1,600 SPF roofs, which 97.6% did not leak”

Sprayed Foam has an excellent R-Value and generally 2" of Spray Foam represents 3" of foam board. Walking on the hard and durable foam roof surface feels somewhat like walking on a concrete sidewalk. SPF is vulnerable to ultraviolet rays, and must be protected by an elastomeric coating layer. The coating (acrylic, polyurethane, or silicone based) is used to provide a reflective surface. Typically, granules are embed in the top layer for added UV and hail protection of the coating layer. Apex uses a unique re-coating maintenance plan.

Foam as an Insulator

By nature, SPF Foam Roofs are water resistant because the structure is based on millions of tiny closed cells. This closed cell structure also

makes the foam an excellent insulator, giving SPF foam an incredible R-Value of 7 per inch. R-Value represents thermal resistance; the higher an R-Value, the more effective an insulator. Spray foam is the highest R-Value insulator on the market. It's no surprise SPF has often been used to insulate the external fuel tanks of NASA space shuttles to keep them super-cold. Foam roofs provide the insulation that other roof systems lack without additional materials.

SPF roofing systems appear to have a very high degree of sustainability with an indefinite life expectancy when properly maintained with periodic re-coating.

Are SPF Roof Systems Green Construction?

Properly installed SPF roof systems can easily last 20 years or longer without any maintenance. In addition, properly maintained SPF Foam Roof systems can last the life of a property. A SPF roofing system study was performed in 2004 by Michelsen Technologies and involved a life-cycle analysis in five climate areas of the United States. Analysis of evidence led to the conclusion that the average SPF roofing system costs 15% to 50% less to install and maintain than a conventional membrane roof system over a thirty year period. Maintenance re-coating is provided using the APEX | WDG Silicone Restoration Membrane-SRM that is comprised of 95% solids silicone.

Conclusion

Foam roofs provide excellent insulation which cuts energy usage, which lowers fossil fuel consumption, ozone depletion, and prevents global-warming. Foam roofing is also renewable and proper maintenance only requires periodic re-coats, which can allow the Foam Roof System to last the life of the building. APEX strives to provide seamless roofing that saves money and provides high quality.

PERFECT FOR FIXING BAD ROOFS

Often light-weight foam can be applied over an existing roof-membrane (i.e. the original membrane can be re-used), which prevents landfill waste. According to a 1999 survey by the National Roofing Contractors Association (NRCA), more than 68.5 percent of the low-slope re-roofing market includes tear-off and replacement of the existing roof membrane.

According to the 2010 Roofing Market Forecast by TEGNOS Research for 2011 there is more than 2.5 Billion square feet of low slope and flat roofing structures in America. That means that approximately 1.7 Billion square feet will require tear-off and landfill waste unless we implement a green alternative using spray foam roofing and silicone restoration membranes.

