

MAT RELEASES

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Better than Ever BUR Delivers a 1-2-3-4 Punch

Asphalt Systems Hold the Multi-Ply Advantage

Economical and durable, asphalt roofing remains a favorite

Built-up roofing (BUR) systems use the redundancy of multiple layers and the proven performance of asphalt to provide long-term durability and excellent water resistance. Asphalt roofing systems provide time-tested performance at a very economical price, making them ideal for both large and small buildings with low-slope roofs. These benefits can be obtained without compromising aesthetics or solar reflectance.

The Asphalt Roofing Manufacturers Association (ARMA) recommends a "whole-system" approach when evaluating roofing systems for specific applications. Over the years, asphalt roofing manufacturers have adapted their products to changing design needs. The roofing industry continues to respond to the new challenges presented today; as a result, asphalt BUR is better today than ever before.

Staying Power

In many ways, today's hot-applied BUR roofing systems are not much different from those installed when ARMA was founded in 1915. A professionally installed, traditional built-up roof is hard to improve upon. A four-ply BUR provides about 280 mils of waterproofing thickness, whereas other systems typically provide 60 mils of thickness (and sometimes less). The increased mass enables BUR to stand up to the forces of nature.

BUR Today

Today, the solar and thermal properties of a roofing system are at least as important as moisture protection. Reflective coatings are just one option in the whole-system building approach. With today's BUR materials, a building owner can enjoy the long-term performance advantage of a traditional asphalt built-up roofing system and have a system that provides environmental benefits as well.

Light-colored gravel is an excellent choice for an energy efficient BUR system. Its reflectance is on the order of 40 percent when initially applied. This reflectance, in combination with its thermal mass and self-ventilating capability, is sufficient to reduce roof temperatures and provide significant energy-efficiency performance.

As an alternative to a gravel surface or coated surface, light-colored or metallic-surfaced modified bitumen membranes and BUR cap sheets are available

that can increase the reflectance of asphalt BUR. So, if energy efficiency is important to the roofing system, BUR has options that can meet this need.

Whole Building Design

When the whole-system approach is used to evaluate the performance of roofing systems, some combination of asphalt roofing materials and insulation is usually found to be the best choice, even in cases where reflectance and other energy/environmental concerns are heavily weighted. A traditional asphalt built-up roof with a reflective modified bitumen cap sheet -- or a reflective, non-modified glass reinforced mineral surfaced cap sheet combined with a moderate amount of insulation -- can sufficiently reduce heat loads to save on air-conditioning costs during the daytime, and provide outstanding roof wind resistance and longevity.

Asphalt BUR is an excellent system for high-velocity winds areas as well. High winds produce tremendous stress concentrations that can tear apart a membrane that is not sufficiently attached. Appropriate fasteners closely spaced are used with good success. In high-wind zones, BUR can often be fully adhered to the deck or substrate. Asphalt binds the membrane plies together and the membrane itself adheres to the roof deck or substrate; the substrate itself is often installed with asphalt. Thus, the whole system can withstand extreme uplift forces because it is evenly distributed over a large area when the roofing system is fully adhered with asphalt.

Sustainable Asphalt Roofing

Asphalt roofs are expected to be the workhorse for commercial buildings well into the present century for as long as building designers and building owners follow the whole-building approach in roof design. Knowledgeable roofing professionals will opt for the best combination of high performance, longevity, cost effectiveness and energy efficiency when choosing and designing low-slope roofing systems. In doing so, they will benefit from greater flexibility in the selection of roof systems as well as operating equipment for their buildings.

One thing is certain: For the foreseeable future, whenever the roofing system is approached as a whole, there will be a place for asphalt-based BUR products.



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