

U.S. PLY, INC. FAQ's

In U.S. PLY's continuing effort to provide the best customer service, we have provided common frequently asked questions regarding roofing with the appropriate answer below.

If you do not see an answer to a question that you may have, feel free to contact us and we will be happy to provide you with more information.

What are the major low-slope roofing systems?

The two broad categories of asphalt roofing systems for commercial, industrial and institutional buildings are Built-Up Roofing (BUR) and Modified Bitumen Systems (MBS). What is Built-Up Roofing (BUR)?

Built-up Roofing (or BUR) is the most popular choice of roofing used on commercial, industrial and institutional buildings. BUR is used on flat or low-sloped roofs and consists of multiple layers of bitumen and ply sheets. Components of a BUR system include the roof deck, a vapor retarder, insulation, membrane and surfacing material. The components are assembled at the job site to actually form the built-up roof. At the heart of this roofing system is the roofing membrane, which consists of roofing bitumen and multiple reinforcing plies of roofing felt.

Roofing bitumen is the primary adhesion/waterproofing agent used between roofing plies. Bitumen arrives at the job site in solid form, but is heated and applied as a liquid. Roofing bitumens may be either a product of petroleum refining (asphalts) or a product of the coal-cooking process (coal tar pitch).

Multiple reinforcing "plies" are asphalt-coated roofing sheets or felts installed in three or more layers to strengthen and stabilize the BUR membrane. These multiple reinforcing felts also make the membrane more pliable and resilient, protect the bitumen from water degradation, and serve as a fire-retarding element in the membrane system.

BUR roofing membranes can be protected from solar radiation by embedding gravel in the bitumen, applying a surface coating or applying a granular-surfaced "cap" sheet. Light-colored surfacing materials can be used to reflect heat from the building. In addition, surfacing agents can provide additional fire protection.

What is Modified Bitumen (MB) or Modified Bitumen Membranes (MBS)?

Modified bitumen membranes -- MBS -- combine the features of a built-up roof with the added tensile strength from its polymer modification. Using a reinforced sheet that is prefabricated in the plant, modified bitumen systems require a less labor-intensive application and can be applied cross-platform in both commercial and certain residential applications.

A modified bitumen roofing system is composed primarily of polymer-modified bitumen reinforced with one or more plies of fabric such as polyester, fiberglass or a combination of both. Factory surfacing, if applied, includes mineral granules, slag, aluminum or copper. The bitumen determines the membrane's physical characteristics and provides primary waterproofing protection, while the reinforcement adds strength, puncture resistance and overall system integrity.

Factory-assembled, modified bitumen membranes undergo strict quality control standards to ensure uniform thickness and consistent physical properties throughout the membrane. The finished roofing system is usually a two- to four-ply system consisting of a modified bitumen membrane and a base sheet, with additional plies for added strength if needed. The substrate often determines which ply system is best specified.

The finished roofing membrane may consist of one or more modified bitumen sheets, or it may be comprised of a combination of built-up roofing (BUR) felts and one or more modified bitumen sheets. The type of substrate and the performance objectives influence the specification of the modified bitumen membrane system.

There are modified bitumen membranes tailored to almost every type of construction design and climate: for new roofing or reroofing of commercial buildings, residential high rises, domes, spires, and most

categories of low-slope or steep-roof roofing. Thus there are a variety of modifiers, and types of reinforcements and surfacings available.

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How often should a building's roof be inspected?

Professional opinions will vary, but as a good practice your roofing system should be inspected (on average) twice a year. If there are heavy storms, you should call for an inspection to ensure that your roof has not been damaged. What is the best method to inspect a building's roof?

The best method to use to inspect a building's roof is to partner with a good roofing specialist. Experienced roofing professionals are trained to identify problematic areas. Experts recommend that property owners should partner with a qualified (certified) roofing specialist (and / or Manufacturer) to inspect a roof twice a year. In between inspections, you should look for potential problems such as ponding and interior water spots after a storm.

What should a company do to look for potential roofing problems?

Several common problems to look for include: a ceiling tile that begins to dampen, masonry walls that show moisture and small puddles that start to accumulate on an interior floor. Contacting a qualified roofing specialist to perform maintenance surveys will assure that small problems do not become large, and/or costly. How long should a building's roof last?

A life of a building's roof depends on several contributing factors including the quality of the materials, the quality of installation, and preventative maintenance to spot problems before they become large ones. Some roofs are designed for a life expectancy of 30-plus years while other roofs have a life expectancy of 10 years or less. Research proves that the number one reason why roofs do not survive their anticipated life cycles is the neglect of maintenance.

What hidden costs are associated with roof leaks?

Many costs are associated with leaks: Downtime for production, lost use of space, tenant complaints, slip and fall accidents (legal claims), mold and mildew, employee moral and productivity issues.

What can cause immediate problems with my roof?

Extreme weather…Lightening, high winds, hail, drenching rains that overflow the flashing heights.

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Equipment additions…Improperly added equipment or other items improperly added on the roof (items added by tenants are a very common source of roofing problems).

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- Trade damage… Punctures, holes etc caused by trades other than the roofing contractor.

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- Unintended Abuse…Vandalism or accidental damage…even a small hole can let in a large amount of water into the roofing system. What “wears out” a roof?

Structural Movement…such as building settlement or expansion/construction not accommodated by the roofing system.

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Exposure…either long-term exposure to the elements (sun, water, freeze-thaw) or short-term exposure to damaging air pollutants and chemicals.

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- Improper application - (arguably the largest potential hazard for premature roof wear). It pays to limit your exposure to

using only top quality products and factory certified applicators.

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- Biological Growth…Such as vegetation in areas of standing water or algae.

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- Not fixing Problems Promptly…these can add up to a much shorter roof life-e.g., if a small problem is not repaired, then a large amount of insulation can be damaged.

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- Forgetting About Maintenance…This is perhaps the single biggest oversight cause of premature roof failure.

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- Change In The Use Of The Building…e.g., an increase in the interior relative humidity of a building can cause severe condensation problems within the roofing system.