CARLISLE SYNTEC SYSTEMS

10 Reasons to Choose TPO over Asphalt

1 UV RESISTANCE

Modified bitumen (mod bit) and asphaltic roofing systems will break down under direct exposure to the sun's UV rays. That is why they need to be covered with granules or coatings. Every square foot of Sure-Weld® TPO membrane includes the industry-leading OctaGuard XT™ weathering package to stand up to intense UV exposure for decades without any surface treatment or covering.

2 REFLECTIVITY

White and Tan Sure-Weld TPO membranes have exceptionally high reflectivity, making them ideal for buildings in cooling-dominated southern climates. Mod bit sheets rely on factory-applied acrylic coatings, films, or special granules. Each has the potential to become dislodged or un-bonded over time. In addition, granulated surface textures are much more prone to dirt accumulation than smooth-surfaced TPO membranes, resulting in lower long-term reflectivity for mod bit systems.

3 HAIL AND PUNCTURE RESISTANCE

Asphalt tends to become brittle with age and can lose the granules that protect its surface, leaving it more vulnerable to hail damage. Sure-Weld and FleeceBACK® TPO membrane systems pass FM's Severe Hail and Very Severe Hail testing, achieve a UL 2218 Class 4 impact rating, and have shown greater dynamic puncture resistance than two-ply mod bit in the ASTM D5635 puncture test. FleeceBACK TPO systems can also provide warranty protection against puncture and hail up to 4 inches in diameter.

4 FLASHING DETAILS

Many mod bit and BUR systems exclude details like pitch pockets from their warranties. Asphalt-based flashing cements are messy, and many details require a cant strip because mod bit membranes can't make a 90-degree bend without cracking. TPO flashings are clean, flexible, and easy to install. Carlisle covers all its details and offers a wide array of prefabricated, custom-fabricated, and pressure-sensitive (peel-and-stick) accessories that are quick and simple to use.

5 SIMPLICITY

Mod bit systems require multiple layers of different base and cap sheets, and often require different materials on walls or curbs versus the field of the roof. This can make installation confusing or result in improper installation. As a single-ply membrane, Sure-Weld TPO is simple and easy to install, and the same membrane can be used to flash walls and curbs.

6 SAFETY/ADHESIVE TECHNOLOGY

Mod bit and BUR systems are often installed using 425°F asphalt or torches. Torch-applied mod bit, which is applied with an open flame, also poses obvious fire and safety hazards. Both systems present problems and undue risk to the building owner, which is why many municipalities and companies have banned the use of torches on roofs. Carlisle's Sure-Weld TPO is installed with adhesives, fasteners, or ballast, all of which are much less disruptive and safer to install.

7 FEWER SEAMS

Field seams are where workmanship issues can compromise a roofing system's integrity. Carlisle's 10- and 12-foot-wide TPO sheets reduce the frequency of field seams by up to 77% compared to 3.3-foot-wide rolls of mod bit.

8 LABOR SAVINGS AND COST

Compared to TPO, mod bit and asphalt systems typically require more material and labor to install, inflating the cost of the roof system. Specialized labor that is needed to apply many types of asphalt-based systems is also becoming scarce, resulting in even higher costs and low installation quality.

9 PONDING WATER

Ponding water accelerates the loss of surface granules and exposes asphalt membranes to more UV rays, which leads many mod bit suppliers to void their warranties. While roofs should be designed to avoid ponding water, Sure-Weld TPO membranes are not adversely affected by this phenomenon and can tolerate ponding water without degradation.

10 NATURAL RESOURCE CONSERVATION

Mod bit and built-up asphalt systems can weigh 4 pounds per square foot and are primarily derived from crude oil. TPO membranes generally weigh less than half a pound per square foot and can be produced using local sources of natural gas. TPO systems consume far fewer natural resources and provide reflectivity and longevity, reducing energy consumption over the roof's life Mechanically attached and ballasted TPO membranes can also be recycled at the end of their service life.

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