
Vinyl Roofing

Durability

- The vinyl polymer's composition gives this material an inherent fire resistance not found in alternative materials without additives.
- Vinyl roofing membranes have been used successfully in waterproofing applications for more than 30 years.
- The heat-welded seams of thermoplastic vinyl form a permanent, watertight bond that is stronger than the roofing membrane itself. This is a major advantage over roofing systems that rely on adhesives, tapes, and caulks to seal the seams.
- Properly designed vinyl roofing systems provide durability and can meet or exceed the wind uplift requirements needed to obtain FM approvals -- many in-service membranes have survived the onslaught of Category 3 hurricanes, and can be designed specifically for storm-prone climates.

Sustainability

- A white vinyl roof can reflect 80 percent or more of the sun's rays and emit at least 70 percent of the solar radiation that the building absorbs, making it the more sustainable roofing option.
- In full sun, the surface of a black low-slope roof may experience a temperature rise of as much as 50 to 90 degrees, reaching midday temperatures of 150 to 190 degrees in summer. A white vinyl roof on the same building typically increases only 10 to 25 degrees above ambient temperatures, lowering surrounding air temperature and reducing smog formation.
- Vinyl is the only commercial, sustainable roofing material that is being recycled at the end of decades of service life into the feedstock to make new membranes.
- Vinyl roofing membranes have a long service life that is second to none. Many vinyl roof systems have been in service in excess of 25 years.
- When compared to other roofing materials, less energy is needed to produce the raw material vinyl and process it into the end product. Most alternatives have far more embodied energy.
- 57 percent of vinyl resin is derived from salt. Less oil is consumed to produce vinyl than in the production of base materials for any other single-ply roofing membrane.

Aesthetics

- Vinyl membranes are typically available in white, beige, or gray. However, adding pigments to vinyl resin during formulation can create membranes in a wide spectrum of hues.
- Complex roof lines and curvatures or multiple roof penetrations all can be accommodated by vinyl's inherent flexibility and strength.
- Some green roofs have lasted more than 40 years without being replaced, bringing aesthetic, ecological and social benefits to modern buildings in urban areas.
- Vinyl roofing is often used in the waterproofing layer of these planted roofs; the permanent hot-air welded seams do not deteriorate in the perpetually moist environment of a green roof, and it is highly effective at preventing water and root penetration.

For more information, including a vinyl roofing EPD, visit www.vinylroofs.org.