

# The Polyurethane Difference

OptiMax™ membranes combine two of the most effective waterproofing materials on the market - polyurethane and asphalt - in a patent-pending, groundbreaking “active modification” process involving chemically locking the polyurethane modifier to the asphalt. This extremely strong link increases the life cycle of your roofing system and results in a lower overall cost of ownership throughout the life of the roof.



## Why OptiMax?

Garland's OptiMax polyurethane-modified asphalt-based roof membrane sets a new bar for performance, providing the ultimate value in high-performance roofing. This is the world's first and only thermoset polyurethane-modified asphalt-based roof membrane, designed specifically to outperform industry expectations. OptiMax's unique formula provides resiliency, unmatched mineral retention, exceptional weathering characteristics and excellent heat/chemical resistance.

## Why Polyurethane?

Garland values consistency and dependability - after all, we have been around since 1895 - which is why we trust polyurethane. For decades, urethane products have been a standard of strength and durability across all industries from military equipment to household items.



### Paving

Polyurethane is added to paving asphalt in European roads to prevent rutting and cracking under heavy traffic, and it's used in running tracks for the same reason. The polyurethane bonds so strongly that it can withstand constant abuse - like freeze and thaw cycles on a roof.



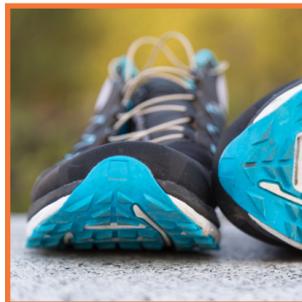
### Military Equipment

The U.S. Navy has used polyurethane to coat submarines and marine vessels because it has such high chemical resistance and can stand up to elements like UV radiation and salt water, similar to the harsh elements a roof faces.



### Space Exploration

NASA uses polyurethane to protect space shuttle fuel tanks, keeping 395,000 gallons of liquid hydrogen at -425°F (-252°C). That is an extreme example of polyurethane's ability to withstand temperature change and prevent issues like low-temperature cracking in the membrane.



### Shoe Soles

Shoe soles are manufactured with polyurethane because it has the elastic capabilities of rubber, but measures higher on the hardness scale so it can handle more wear. Polyurethane also retains its flexibility longer than rubber, translating to durability and endurance on a rooftop.