ELASTOMERIC COATINGS

Elastomeric coatings are widely used in architectural and commercial construction where durability, weather resistance, and crack-bridging capability are important. These coatings are formulated with highly flexible polymers that allow the coating film to stretch and recover as building substrates expand and contract due to temperature changes and environmental exposure.

Because of their ability to form thick, flexible membranes, elastomeric coatings are often specified for exterior surfaces where cracking, water intrusion, and weathering are concerns. When properly selected and applied, these coatings can help extend the service life of building envelopes by improving resistance to wind-driven rain, UV exposure, and substrate movement.

However, elastomeric coatings are not a one-size-fits-all solution for every surface or condition. Understanding the differences between elastomeric wall coatings and elastomeric roof coatings, along with their respective benefits and limitations, is essential for selecting the right system for each application.

What is an Elastomeric Coating?

Elastomeric coatings are high-build, flexible coatings designed to form a continuous, protective membrane over a substrate. Unlike conventional paints, elastomeric coatings are formulated to stretch and recover without cracking, allowing them to bridge small substrate cracks and accommodate normal building movement (Figure 1).

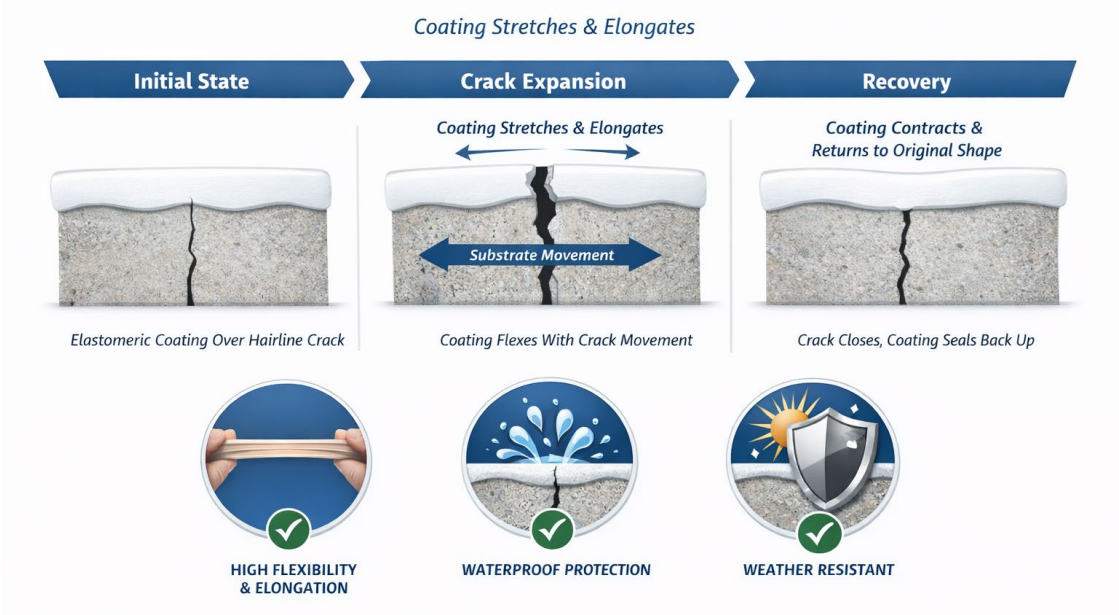

Figure 1

A key difference between elastomeric coatings and conventional architectural coatings is film thickness. Elastomeric coatings are designed to be applied at substantially higher film builds, in some cases at up to ten times the thickness of a typical paint film. This heavier application is not incidental; it is essential to developing the continuous membrane and performance properties the coating is intended to provide. If applied too thin, the coating may not deliver its intended crack-bridging ability, weather resistance, or water-resistant protection

Typical characteristics include:

- High film build
- Excellent flexibility and elongation
- Crack-bridging capability
- Water resistance
- Enhanced weather durability
- UV resistance

These properties make elastomeric coatings particularly useful on substrates such as stucco, masonry, concrete, and certain roofing systems, where a thicker, more flexible protective barrier is needed.

Elastomeric Wall Coatings vs. Elastomeric Roof Coatings

Although both products fall under the category of elastomeric coatings, wall coatings and roof coatings are designed for very different service environments and should not be considered interchangeable.

Figure 1

Elastomeric wall coatings are formulated primarily for vertical surfaces such as stucco, masonry, and concrete. Their main functions are to bridge small cracks, improve weather resistance, and help protect building facades from wind-driven rain. To perform in these conditions, wall coatings are typically

designed with high flexibility, good sag resistance for vertical application, and a degree of breathability that allows moisture vapor to escape from the wall assembly. Vista Paint's Solotex is an example of an elastomeric wall coating developed for these types of exterior wall applications.

Elastomeric roof coatings, by contrast, are designed for horizontal or low-slope surfaces where exposure conditions are much more severe. Roof coatings must withstand prolonged UV exposure, wide temperature swings, foot traffic, and in some cases standing or ponding water. As a result, they are formulated with performance properties that differ from wall coatings, including greater water resistance, resistance to ponding water where required, higher tensile strength, and durability suited to horizontal exposure. Vista Paint's Soltec is an example of an elastomeric roof coating formulated specifically for roofing applications where waterproofing performance and UV resistance are critical.

Because these products are engineered around different substrates, exposure conditions, and performance demands, using a wall coating on a roof, or a roof coating on a wall, can lead to application problems and reduced long-term performance.

Benefits and Limitations of Elastomeric Coatings

When properly specified and applied, elastomeric coatings can provide meaningful advantages for exterior building protection. Their high-build, flexible films allow them to bridge small static cracks commonly found in stucco, concrete, and masonry, helping reduce water intrusion and improve the long-term durability of the building envelope. These coatings also provide strong resistance to wind-driven rain, UV exposure, and general weathering, making them well suited for demanding exterior conditions.

By sealing hairline cracks and protecting porous substrates, elastomeric coatings can help reduce water penetration that might otherwise contribute to substrate deterioration. Their durability and heavier film build may also help extend maintenance and repaint cycles compared with conventional architectural coatings.

At the same time, elastomeric coatings have important limitations and should not be viewed as a universal solution. Because they form highly water-resistant films, moisture present within the substrate at the time of application can become trapped beneath the coating. As that moisture attempts to escape, blistering, adhesion loss, or other film defects may occur. For this reason, proper moisture evaluation and surface preparation are critical before application.

Elastomeric coatings may also exhibit lower dirt pickup resistance than many conventional exterior coatings, which can make surfaces more prone to collecting airborne dust and grime over time. In addition, color retention may be less favorable, particularly in deep or dark colors, where fading and color change can become more noticeable with prolonged exterior exposure.

Surface preparation is especially important with elastomeric systems. Dirt, efflorescence, chalking, and loosely adhered existing coatings can all interfere with adhesion and reduce overall performance. In addition, while elastomeric coatings can bridge small static cracks, they are not intended to correct structural movement or repair large dynamic cracks. Significant substrate defects should be properly repaired before coating application.

Application also requires careful attention. Due to their high viscosity and intended film thickness, elastomeric coatings often require specific equipment, application techniques, and coverage control to achieve the desired performance.

Key Takeaways

Elastomeric coatings can provide a durable, flexible barrier that helps protect building surfaces from weather exposure and minor substrate movement, but long-term performance depends on using the right product for the right application and preparing the substrate correctly. Elastomeric wall coatings and elastomeric roof coatings are designed for different service conditions and should not be used interchangeably. Wall coatings such as Vista 500 Solotex are intended for vertical surfaces where crack bridging and weather protection are important, while roof coatings such as Vista 098 Sol-Tec are formulated for the more demanding conditions found on roof surfaces, including intense UV exposure, high solar load, and the need for enhanced reflectivity and thermal protection.

It is equally important to recognize that elastomeric coatings are not a cure-all. Their performance depends heavily on proper jobsite evaluation and surface preparation. Substrates should be clean, sound, and dry, with efflorescence, chalking, and loose coating removed, cracks and surface defects repaired, moisture content verified, and the coating applied at the recommended film thickness. When these factors are addressed, elastomeric coatings can play a valuable role in extending the service life of exterior walls and roofing systems. When they are overlooked, even a high-performance coating may fail to deliver the expected results.