

Acrylic or Silicone?

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We all have very distinct preferences when it comes to our choices. Generally, when a decision is made it is because of a personal conviction for one option over another.

Every day we go through life making these choices; Mayonnaise or mustard? Ford or Chevy? Nike or Under Armour? LeBron or Michael? Sometimes the choice can be easy, but most times the decision is influenced by our immediate surroundings.

This is particularly true with roof coatings, and preferences of chemistry for roof restoration and repair. As the roofing industry continues the evolution of liquid applied options being more accepted and prevalent, it stands to reason there will be more frequent arguments as to which is better; acrylic or silicone?

Over the years, acrylic coatings have been a staple in the roof coating industry. With formulation originating in Germany, it is a system that has stood the test of time. Because of the water borne features, acrylics are typically more cost effective and better for the environment than the solvent based counterparts. When applied

to a sloped roof, a good acrylic coating will last throughout the manufacturer's warranty and will, typically, be eligible for a recoat to extend the life for another defined term.

While white is the preferred color to maximize reflectivity, acrylics hold color better than any other chemistry. If and when a custom colored roof is necessary for architectural or aesthetic requirements, acrylic is the best option because of its proven ability to hold the color stable over time.

Before I get ahead of myself, the use of acrylic coatings on a low-slope roof where ponding water has the opportunity to accumulate is not advised. Acrylic, water-based coatings, break down under ponding water over time because the coating can re-emulsify. If it rains often, and ponding areas remain, these areas eventually will fail. Solvent-based systems are a solid solution for low-slope application.

If there is one coating chemistry that has commoditized the industry it would be acrylics because of the relative ease in which acrylic coatings can be manufactured. Years ago, a surplus was created in the market and in turn a lot of untrained contractors were applying water based products into situations where breakdown was imminent. These failures can be attributed to some of the negative impressions that coatings have been received over time, and emphasize why choosing the proper coating is of the utmost importance when planning your roof project. Many manufacturers will not offer a warranty in ponding situations with acrylic coatings, on the other hand there often are not exclusions when it comes to silicone.

Originally used as a water proofing agent over SPF, silicone



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has increased in popularity as applicators have become more educated on its capabilities as a stand-alone product. Typically, silicone is available in one of two varieties based on solids by volume. A low solid version (67 percent) can often be paired with a urethane for a coating system, but the most popular trend in the coating industry today is the use of a High Solid (HS) silicone (over 90 percent solid content). Because it is a solvent-based product, silicone is not nearly as easy to compound and the majority of the silicone coating brands on the market today are manufactured by less than 10 companies.

The application of HS Silicone has been particularly attractive due to its strong adhesion to most substrates, durability to advanced weathering, and high solid content (allowing greater DFT). While it is true that HS silicones can produce more millage in a single pass, it is always recommended that a contractor make multiple passes on a roof to ensure uniformity in the coating across the entire field. The hydrophobic attributes (ability to withstand water) are what make silicone coating less susceptible to wear over time as it's acrylic counterpart, however this is also why silicone can become very slippery when it is wet or even damp. So slick, in fact, that it could become an unwanted liability that nobody in the value chain (building owner, contractor or manufacturer) would want

to assume if an accident did occur, furthering the importance of specifying the correct coating for the roof on which it is being applied.

When it comes to making the decision of acrylic vs silicone, simply stated, the argument has been overblown. It shouldn't be a matter of acrylic or silicone, it should be a matter of acrylic AND silicone because both have a place in the roofing industry. While I would never suggest an acrylic coating on a low-slope roof due to the inevitability of failure, I also advise against silicone coatings for sloped roof application because of the hazards they may cause when damp or wet. For professional contractors, pigeon holing the wrong system to sell more product should be frowned upon: the answer to the coating question should be determined by what is best for the roof that is being restored.

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Josh Dernosek has been with Aldo Products for two and a half years in a sales/business development and marketing role. Josh is based in the greater Charlotte area and manages a Southeastern territory for the company. After several successful years in the hospitality industry, Josh has fully immersed himself in the thriving coatings industry to become an industry steward. Josh has a degree in Communications from Appalachian State University.

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