

## Elastomeric Coating

An **elastomeric coating** is roofing applied in a viscous state. It has elastic properties, and can stretch in the summertime heat and then return to their original shape without damage.

Elastomeric coatings usually contain polymeric materials, such as acrylic, and a white pigment, such as titanium dioxide, to make them opaque and reflective. An elastomeric coating is applied thicker than paint.

An elastomeric coating can be used on virtually any substrate including asphalt built-up roofing, concrete roofing, metal roofing, modified bitumen roofing, polyurethane foam roofing and single ply roofing.

Common Types: *acrylic elastomeric coating, butyl elastomeric coating, silicone elastomeric coating and urethane elastomeric coating.*

### Roof Restoration Process



#### Roof Cleaning

Pressure wash the entire roof surface to remove all dirt, dust, previous paints and coatings that are delaminating and achieve a clean and sound substrate. Some roofs may require special detergents. Call us for recommendations.



#### Roof Priming / Acu-Rust Prime

Prime the roof to ensure good adhesion of all coatings. We have primers suitable for almost all roof types. Even totally rusted roofs.

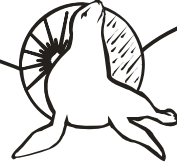
**NO MORE RUST!**



#### Roof Sealing / Acu-Caulk & Acu-Fabric

All seams, penetrations, non-structural gaps and parapet walls should be flashed. All fasteners should be sealed or capped with elastomeric caulk.

**NO MORE LEAKS!**



## Roof Coating / Acu-Shield

Inspect the roof for defects or flaws. Apply the elastomeric coating to the entire roof surface to produce a seamless, watertight membrane.

**GOOD AS NEW!**

## Benefits

- Save up to 50% compared to re-roofing with little or no disruption.
- Reflects up to 90% of the heat. Saves money on cooling.
- Solves roof leaks economically and effectively.
- Includes a 10 year manufacturer's warranty when professionally installed.

## Recommended Equipment

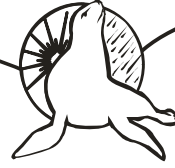
Elastomeric coatings are best applied by high pressure airless sprayers. We recommend a model that has a pressure rating of 3000 psi and a flow rate of 3 gallons per minute.

## Articles

### ASTM D-6083 Specification for Roof Coatings

ASTM D-6083 is entitled Standard Specification for Liquid Applied Acrylic Coating Used In Roofing. It was developed in 1995 under the Roofing and Waterproofing Committee, D-08. More specifically, it was developed in the Non-Bituminous Organic Roof Covering Subcommittee. While other authors have written articles describing the test methods in more detail<sup>1</sup>, this paper endeavors to assist the reader in understanding how the specification came into existence, why it includes the tests listed in the specification, and what the test results really mean from a "real world" perspective.

This specification, ASTM D-6083, was developed as a specification for acrylic roof coatings employing previously developed standard test methods found in roofing and coatings disciplines. The underlying purpose of the development of this specification was borne from concerns among the various stakeholders in the roofing industry to establish a minimum level of quality for acrylic roof coatings. It had become increasingly difficult for architects, consultants, specifiers, and contractors to distinguish among acrylic roof coating products.



ASTM D-6083, Standard Specification for Liquid Applied Acrylic Coating Used in Roofing, is the product of literally hundreds of hours of concerted efforts by participants to establish a minimum laboratory standard that can serve as a general proxy for actual field performance.

## **Reflective Roof Coatings**

Reflective roof coatings are liquids that are brush, roller or spray applied to a surface such as a low-slope roof. They seal the surface, offer protection against degradation due to ultraviolet radiation and reflect solar radiation away from the surface before it is absorbed and heats up the surface. If initial reflectance is greater than 80%, they are called radiation control coatings. Research at ORNL on radiation control coatings has focused on the effect of weathering and substrate type on the solar reflectance. We have recently expanded our focus to include the entire range of roof coatings.

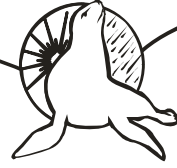
On a typical sunny summer day, smooth surfaces with fresh white coatings (reflectance near 80%) only heat up about 10 to 20°F above ambient temperature. Coated rough surfaces or weathered surfaces (reflectance near 55%) heat up 30 to 50°F above ambient temperatures. An uncoated surface (reflectance near 10%) can reach temperatures nearly 100°F above ambient temperatures. How much the cooling load is reduced because of the cooler temperatures depends on roof insulation, building operating conditions and other factors specific to the particular application.

## **An Alternative to Roof Replacement**

For roofing jobs on existing buildings, the question faced by the roofing professional still remains the same: should an expensive new roof be installed or is there a roof replacement alternative which will prolong the life of the existing roof? The answer may be a liquid applied roof coating over the existing aged roof.

Because these coatings can be formulated white, they can be effectively used to impart reflectivity to the roof. This not only improves aesthetics, but also cools the roofing surface, contributing to longer service life. Since the surface of the roof is cooler, an additional benefit is a reduction in a demand for air conditioning.

The coating selected should be a result of a detailed assessment of the type and condition of the roof, the desired benefit, the capabilities and prescribed uses for the coating, and the economic considerations of the individual job. Liquid-applied roof coatings provide a means of prolonging the life of an existing roof, and are often an effective alternative to reroofing.



## **Solar Reflectance and Radiation Control Coatings**

Radiation control coatings (RCCs) are described in ASTM Standards under development to be liquid applied coatings having solar reflectances of at least 0.75 and ambient temperature emittances of at least 0.75. RCCs are intended to reduce solar heating loads on buildings by reflecting the incoming solar radiation.

The computer modeling parts of these studies clearly show significant reductions in daytime roof temperatures and solar loads.

## **Energy Seal Coatings**

- **Acu-Shield meets or exceeds standards set by ASTM D-6083 Specification for Roof Coatings**
- **Our Reflective Roof Coatings offer some of the highest initial and long term solar reflectance in the industry.**
- **Energy Seal Coatings roof coating systems offer an Attractive Alternative to Roof Replacement, in some cases saving the building owner over 60% of the cost of roof replacement.**
- **Industry standard for Solar Reflectance and Radiation Control Coatings is at least 75%. Our Acu-Shield offers an initial solar reflectance of 88% and 84% in three years of exposure. Far and away exceeding the industry standard.**