



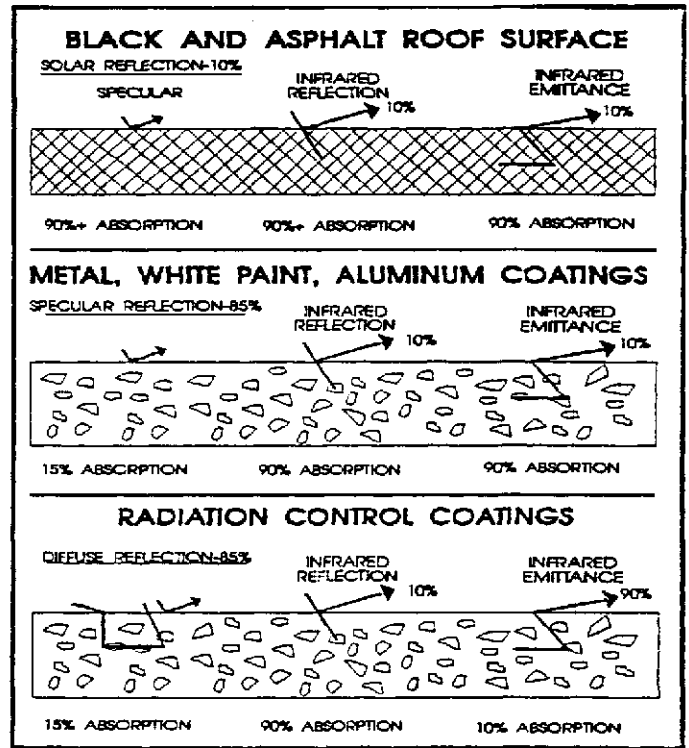
RADIATION CONTROL COATINGS

WHAT ARE..... RADIATION CONTROL COATINGS?

Radiation Control Coatings, or RCC's, reflect the sun's energy and emits absorbed heat. Roofs and buildings coated with RCC's are much cooler than black, aluminum coated or conventional roofs. RCC's are white elastomeric coatings that are applied as liquids, have a solar reflectance to 80-90%, an infrared reflectance of 10% and an emittance of 90% of infrared. Like all coating, they have no thermal resistance or R-Value. The reflectance is achieved both from the surface of the coating (specular reflection), as by a mirror, and from within the coating (diffuse reflection) by particles and pigments.

WHY ARE RADIATION CONTROL COATINGS COOLER THAN CONVENTIONAL ROOFS AND PAINTS?

The thickness of RCC's must be 20 to 30 mils in order to achieve maximum reflectance and emittance. Among the properties of RCC's that affect reflectance are the resin matrix (index of refraction, absorbency, chemical stability and film characteristics) and the particles (index of refraction, absorbency, chemical stability, size, shape morphology, interparticle spacing and loading quality). The balancing of these properties forms the technological basis for RCC's and provides the reasons why the RCC coated walls or roofs are cooler than asphalt roofs, aluminum coated roofs, metal roofs, fiberglass asphalt shingles or rolled roofing and other types of roofs and conventional exterior paints.



HOW CAN I PROVE THAT RADIATION CONTROL COATINGS KEEP A BUILDING COOLER THAN OTHER MATERIALS?

Make a test. Coat pieces of metal with various materials. Set in the sun for one hour or more. You can feel the difference of temperatures. The piece coated with the RCC will be noticeably cooler than the other pieces. We tested several 6" X 6" stainless steel metal panels, set in bright sunlight, with an existing air temperature of 60°F, using a surface temperature thermometer attached to the shade side of the panels. Our test results for the various metal panels are shown below:

No Coating	Black	Aluminum Roof Coating	Glossy Paint	Flex® One Coat	Flex® RCC Two Coats
106.0EF	124.5EF	104.3EF	88.8EF	84.3EF	80.5EF