



TYPICAL LIQUID PROPERTIES

Viscosity, Brookfield, cPs 150

Appearance slight straw

DOT Flammability Rating, °F 76-100

Monomer content % 35

SOLAREZ 71x90 series are low styrene emission UV-curable vinyl ester resins. They possess outstanding corrosion resistance properties as well as having robust mechanical specifications that far exceed those of polyesters. They rapidly cure (<5 min.) upon exposure to the safer UVA light (365-400 nm) amply available in natural sunlight and low-wattage fluorescent suntan bulbs.

Epoxy vinyl esters have withstood the world's most vicious chemical environments. They are commonly used to fabricate chemical containment tanks, withstanding harsh acid or alkali environments as well as solvents, heat and pressure. Whereas you might not yourself have a need to guard against harsh chemical containment, common laypublic uses include fabrication/repair of high-performance fuel-tanks housing nitro or alcohol fuels, containment and support brackets for acid batteries and long-term service life in marine environments.

Fabricators will love the ease of working with the ultra-low viscosities (150 cPs) of our vinyl ester epoxies. They are indicated in Vacuum Assisted Resin Transfer Molding (VARTM) and have outstanding wetting characteristics for hand layup.

In general, mechanical properties can be summed up in a few categories; enhanced impact resistance, increased tensile strength, increased adhesion to even the most stubborn substrates and outstanding abrasion resistance. Solarez Vinyl Ester Epoxy resin is an outstanding primer and because it is a hybrid epoxy ester, it is perfectly compatible with polyester, urethanes, epoxies and acrylates in combination layers.

Solarez Vinyl Ester Epoxies are also formulated into fiber-reinforced putties (Solarez EXTREME item #77390) for quick field repair of demanding composite structures. They can be drilled and tapped, have remarkable adhesion and general physical characteristics.

Conveniently, curing commences within 30 seconds of exposure to mid-day sunshine in nonpolar latitudes. Ambient temperatures as low as -20°F or as high as 120°F have little effect on cure time or physical properties of Solarez.

continued

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Finally, A word about UV Curing: The mechanicals of high performance 2-part epoxies are predicated on the condition that they had a perfect stoichiometric mixture (ratio) in laboratory conditions, with post-cure schedules of hours in autoclaves. Standard (MEKP-cured) Vinyl Ester Epoxies are much easier to use but still require mixing and an ambient temperature of a bare minimum of 55°F and not exceeding 90°F. Solarez is a one part system that requires no measuring, mixing or special heat & pressure curing schedules to achieve optimal crosslinking. In fact, Solarez can cure in a range of -20°F to 120°F with little or no variance in cure characteristics.

Handling: SOLAREZ Polyester putty contains ingredients that could be harmful if mishandled. Contact with skin and eyes should be avoided and necessary protective equipment and/or clothing should be worn. For important health, safety and handling information, consult the MSDS before using this product.

Storage: Store @ temperatures below 80°F. keep away from heat, sparks and open flame. handle only in diffused light -- never in direct sunlight. Direct sunlight will cause rapid curing of resin.

Solarez is available in polyester, epoxies, urethanes as well as other resin families.

TYPICAL PROPERTIES OF CURED CASTING @ 77°F (guidance only)

Tensile strength (psi) ASTM D-638 12,000
Tensile modulus, (psi) ASTM D-638 530,000
Tensile elongation, % ASTM D-638 5-6
Flexural strength psi 21,000
Flexural modulus, (psi x 10⁵) 5.4
Compressive strength, psi 17,000
Barcol hardness ASTM D-2583 35
Heat deflection temp, °F 225