

PRODUCT DATA SHEET

SOLAREZ 77420

SOLAREZ 77420 is a lightweight colloidal gel made of UV-stable, DUAL-CURE polyester resin and 3M microballoons. Make no mistake in confusing 3M Microballoons with Q-cel. 3M Microballoons are clearly the better choice for a variety of reasons such as chemical composition, consistency in size and strength-to-weight ratio. This all imparts better behavior like spreadability, sanding and fairing qualities, shrinkage, adhesion and overall strength. Microballoon's spherical structural is ubiquitously demonstrated in physics and nature as the strongest structure per given area. Microballoons "nest" into microscopic voids and give good mechanical tooth at the same time reducing polymer shrinkage and increasing structural stability. Mechanically, the compound sands very nicely and is unequaled as a primer substrate for further laminations or final paint.

The fact that this is a very low exothermic resin, hence low-shrinkage resin make it an outstanding choice for a potting compound and structural base for leash plugs, fin boxes or plugs. A very common mistake is made when utilizing leftover *laminating* resin for use in potting fin plugs, boxes or leash plugs. Laminating resin has a much "hotter" promoter system that is designed to cure resin in thin films. Larger masses of resin, like that in cavities for plugs or boxes allow the resin to exotherm and shrink, pulling away from the walls of the cavity. Microlite is also an excellent choice where compressive strength is of importance such as deck foundations.

This putty exhibits a prolonged "B-Stage" whereby it remains firm and rubber-like for a good 10 minutes allowing the user to cleave off excess material and make for an easier final sanding.

In general, mechanical properties are good. It can be sanded, drilled and tapped and is an excellent substrate for painting. Polyester putties have long been used in the automotive industry as body fillers and the microballoons act like miniature ball bearings that roll over each other, imparting spreadability. They increase the product's overall durability and mechanical tooth as well as corrosion resistance.

Conveniently, curing commences within 30 seconds of exposure to mid-day sunshine in non-polar 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. Another phenomenon attributed to UV curing is the ability to start and stop the reaction when so desired. You may cure the resin for approximately one minute until it has reached "B-Stage" (when the putty is firm) but not yet hard. At this point, the putty is easily cut by a razor blade. When the excess material is cleaved away, the user can "resume" curing by exposing it to sunlight again.

TYPICAL LIQUID PROPERTIES

Viscosity, Brookfield, cPs

Colloidal gel

Appearance

translucent white

DOT Flammability Rating, °F
Monomer content %

76-100
35

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

Handling: SOLAREZ Microlite gel 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.

PRODUCT DATA SHEET

SOLAREZ 77200 & 77100

SOLAREZ 77200 is our original fiber-reinforced putty from 1987 with UV inhibitors designed primarily for surfboard repair with weatherability. It is a thixotropic putty composed of polyester resin, reinforced with both ceramic and glass fibers. It possesses good corrosion resistance and mechanical specs that make it suitable for many applications repairing wood, metal and many plastics except Styrenics, like styrene sheet and Styrofoam which it will melt. Ceramic fibers impart higher heat tolerance as well as increasing the putty's overall adhesion as these fibers' denier is quite thin and allow for good mechanical "tooth". Glass fibers impart good fill & formability into voids that when cured, can be machined or tapped. The putty cures (<5 min.) upon exposure to the safer UVA light (365-400 nm) amply available in natural sunlight and low-wattage fluorescent suntan bulbs.

This putty exhibits a prolonged "B-Stage" whereby it remains firm and rubber-like for a good 10 minutes allowing the user to cleave off excess material and make for an easier final sanding.

In general, mechanical properties are good. It can be sanded, drilled and tapped and is an excellent substrate for painting. Polyester putties have long been used in the automotive industry as body fillers and the fiberglass fibers increase the product's overall durability and mechanical tooth as well as corrosion resistance

Conveniently, curing commences within 30 seconds of exposure to mid-day sunshine in non-polar 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. Another phenomenon attributed to UV curing is the ability to start and stop the reaction when so desired. You may cure the resin for approximately one minute until it has reached "B-Stage" (when the putty is firm) but not yet hard. At this point, the putty is easily cut by a razor blade. When the excess material is cleaved away, the user can "resume" curing by exposing it to sunlight again.

Finally, this putty is a "Dual-Cure" putty. It can be mixed with MEKP catalyst that will allow it to be "dark-cured" as well. It can be cured 100% by MEKP or by Sunlight or both. This can be convenient when some areas of the repair substrate will not allow sunlight (UV light) to reach certain areas.

TYPICAL LIQUID PROPERTIES

Viscosity, Brookfield, cPs	thixotropic putty
Appearance	translucent, clear to slight blue tint
DOT Flammability Rating, °F	76-100
Monomer content %	35

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

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.

PRODUCT DATA SHEET

SOLAREZ Low V.O.C. Polyester Laminating

SOLAREZ Low VOC resin is a low styrene emission orthophthalic polyester resin that is ultraviolet curable. It rapidly cures (<3 min.) upon exposure to the safer UVA light (365-400 nm.) amply available in natural sunlight and low-wattage fluorescent suntan bulbs. It is enhanced with UV stabilizers that greatly improve its weatherability

Curing commences within 30 seconds of exposure to mid-day sunshine in non-polar 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.

TYPICAL LIQUID PROPERTIES

Viscosity, Brookfield, cps	450
Appearance	Clear
DOT Flammability Rating, °F	76-100
Monomer content %	35

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

¹ Tensile strength	9,600
¹ Tensile modulus, psi x 10 ⁶	0.52
¹ Tensile elongation, %	3.0
² Flexural strength	19,000
² Flexural modulus, psi x 10 ⁶	0.52
Compressive strength, psi	17,000
³ Barcol hardness	40
Heat deflection temp, °F	180

Solarez is available in vinyl ester epoxy, urethane, epoxy and acrylate resins as well as other resin families.

Handling: SOLAREZ resin 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.

¹ ASTM D-790

² ASTM D-638

³ ASTM D-2583