SILPAK POLYESTER RESINS

Laminating

Polyester Resins consist of Base Resin (Casting, Laminating, Gel Coat) and require a Catalyst (MEKP) to be added to initiate cure. The amount of Catalyst to use is very small and varies between 0.5 to 2% of the Polyester resin used. The catalyst (MEKP) must be ordered separately. Ambient temperature conditions, type of resin system and amount of catalyst used, as well as the thickness of the part will affect the cure time of resin.

Laminating

SLR-22

General Purpose Laminating Resin used with Fiberglass Fabrics to make mother-molds when supporting thin walled latex, urethane or silicone rubber molds. Use in conjunction with Fiberglass Mat, Cloth or Chopped strand fibers for reinforcement.

- Recommended MEKP Catalyst levels: 1 – 1.5 %.
- Gel Time: 15 Min

Catalyst

MEKP (RCHP-90)

Polyester resin cures by an exothermic (heat) reaction created by promoters (cobalt & amine) and activator Methyl Ethel Ketone Peroxide (MEKP). The reaction of polyester will occur at the thickest cross section sending out a wave of heat, which cures resin to a solid glass-like hardness. Temperature and moisture content can affect the rate of cure and the drying of part's surface. The resin's reaction starts with the addition of MEKP at 0.5% to 1.5 % (2 % for thin laminates). The ratio is dependent on air temperature, resin thickness, temperature of resin and mold. Fillers are added to help control peak exotherm, shrinkage, and cure rate. Unfilled resin can heat up to 300F resulting in cracking. Resins that create uncontrolled peak exotherm can exhibit wrinkles or alligator skin. Using lower levels of MEKP, preheating the mold surface, or both, can change this. In wet weather conditions, tacky surfaces may be exhibited by resin due to high humidity. Working in a controlled, dry-heated area should help resin to cure properly.

MEKP Ratio Chart

Resin (volume)	MEKP 0.5%	MEKP 1%	MEKP 1.5%
1 oz	4 drops	8 drops	12 drops
16 oz	64 Drops 2.25 Grams 2.5 cc	128 Drops 4.5 Grams 5 cc	6.75 Grams 7.5 cc
32 oz	4.5 Grams 5 cc	9 Grams 10 cc	13.5 Grams 15 cc
1 gallon	20 Grams 20 cc	40 Grams 40 cc	60 Grams 60 cc

Physical Properties (Typical Values)

Catalyst MEKP (RCHP-90)

Property	Results
Active Oxygen %	8.9 +/- .01
Color and Form	Colorless Liquid
Specific Gravity @ 77°F (25°C)	1.155
Flash Point (SETA C.C)	200°F (93°C)

Physical Properties (Typical Values)

Cured Material – Laminating Resin SLR-22

Property	Results
Barcol Hardness	36-40
Flexural Strength, PSI	11,150
Flexural Modulus, PSI x 10^6	0.33
Tensile Strength, PSI	5,000
Tensile Modulus, PSI x 10^6	0.69
Elongation %	1.25

Accessories

Polyester Pigments

- Blue
- White
- Black
- Yellow
- Red

Release Agents

- PartAll Film #10 (PVA) – Sprayable Polyvinyl Release
- PartAll Hi-Temp – High Temp Wax
- PartAll Wax #2 – General Purpose Wax

Fiber Reinforcements

4 oz	Fiberglass cloth, good laminating fabric for transmission and strength
10 oz	Fiberglass cloth, great for strength in heavy laminated projects
¾ & 1.5 oz	Fiberglass mat, economical offering good stiffness
½" & 1"	Chopstrands, add to laminating resin to create trowel-on paste for mother molds

Metal Rollers

¾" x 3 and 6" – For minimizing air bubbles

Dispenser Bottle

For MEKP

Rev. 10.31.25