

SILPAK, Inc

470 E. BONITA AVE. POMONA, CA 91767
PH (909) 625-0056 WWW.SILPAK.COM FX (909) 625-0082

Polyester Resins CASTING LAMINATING GEL COAT

Product Data Sheet

Description

Polyester Resins consist of Base Resin (Casting, Laminating, Gel Coat) and require a Catalyst (MEK-P) to be added to initiate cure. The amount of Catalyst to use is very small and varies between .5 to 2% of the Polyester resin used—*must be ordered separately*. Ambient temperature conditions, resin system, as well as part's thickness will affect cure time of resin.

Note: *Requires Extra Shipping Fees. ** UPS Ground Only.*

Available Sizes: Pint (1 lb) Quart (2 lb) Gallon & 5 Gallon

CASTING

SPR-41-F

Specifically designed for casting Water Clear, High Impact resistant parts in thin or thick sections.

Recommended MEKP Catalyst levels: 0.5 to 1.5%—*Depending on part thickness.*

Gel Time: 16 Min

LAMINATING

SPR-29-L

Clear (Bluish Tint) Laminating Resin with UV stability. Excellent for initial coat for Bonded Bronze/Cold Casting @ 2% MEKP Catalyst level—parts can be sanded, polished and buffed. *Gel Time: 15 Min*

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*

GEL COAT

Gel Coat

General purpose Gel Coat used for producing parts. It is usually sprayed into mold, but can be hand applied.

Parts a backed with Laminating Resin and Fiberglass Fabric. Available in Clear, Black, White. Catalyst MEKP Ratio: 1.5-2%

CATALYST

MEK-P (RCHP-90) Peroxides are clear colorless solutions in dimethyl phthalate used principally as an initiator for the polymerization of unsaturated polyester resin systems. Use for normal room temperature cures of Laminating and Casting Resins. Catalyst Ratios of .5 to 2% are typical depending on which system is used as well as ambient conditions.

Available Sizes: 2oz and Pint (1 lb) Bottles

ACCESSORIES

Polyester Pigments Blue, Black, Red, White and Yellow

Release Agents

PartAll Film #10 (PVA)—Sprayable Polyvinyl Release

Partall Hi-Temp—High Temp Wax

PartAll Wax #2 —General Purpose Wax

Fiber Reinforcements

4oz Fiberglass Cloth, good laminating fabric for light transmission and strength.

10oz Fiberglass Cloth, great for strength in heavy laminated products

¾ & 1.5oz Fiberglass Mat, economical offering good stiffness

½" and 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

Cured Properties, Unfilled (Typical):	<u>Casting Resin</u>	<u>Laminating Resins</u>	
	SPR-41-F	SLR- 22	SPR-29-L
Barcol Hardness	38-42	36-40	37-41
Flexural Strength, PSI	13,200	11,150	13,200
Flexural Modulus, PSI x 10 ⁶	0.36	0.33	0.36
Tensile Strength, PSI	6,100	5,000	6,000
Tensile Modulus, PSI x 10 ⁶	0.72	0.69	0.72
Elongation (%)	1.5	1.25	1.5

SPR-41F CASTING RESIN

Typical Properties, Liquid: (SPR-41F)

Color:	Water Clear
Viscosity:	470 cps
Specific Gravity:	1.20
Cubic Foot:	70 LB
Heat Deflection:	130F
Recommended Catalyst Levels:	0.5 – 1.5%

REACTIVITY DATA: (SPR-41F) * @1% MEKP

Gel Time (min):	16.0
Exotherm Time (min):	35.5
Peak Exotherm (F):	285
Barcol Hardness (3/16" Casting):	40-45 Shore D

Casting Suggestions: (SPR-41F)

Because of wrinkles, sticky surfaces, discoloring, bubbles and cracking, a working process must be developed. All the above problems are caused by inconsistent heat control during cure. De-mold the part as soon as possible. A noticeable shrink void can be a sign of material solidifying—immediately remove part from the mold and store in warm, dry area (80F) and allow part to gradually cool and finish curing.

- 1) Molds (Silicone) should be preheated to 100-125F for 30 minutes.
- 2) SPR-41-F must be 80F before using—It can be warmed up in a hot water bath (Place container in a plastic bag).
- 3) Add MEK-P (RCHP-90) at 1% level to start. If material gets too hot (wrinkles) can reduce levels to 0.5%.
- 4) Target goal is to create an even exotherm (chemical reaction of heat that dries the resin).
- 5) Any parting lines can be wet sanded with 400/600 sandpaper, dried then buffed with polishing compounds.
- 6) De-mold times will change with size, shape or amount of RCHP-90 (Do not try to rush the process by adding higher levels of catalyst).
- 7) Full properties will not develop until 24 hours @ 80F. Heat distortion factor is 130F (Time at constant heat).

THE INFORMATION AND DATA CONTAINED HEREIN ARE BASED ON INFORMATION WE BELIEVE RELIABLE. EACH USER OF THE MATERIAL SHOULD THOROUGHLY TEST AND APPLICATION, AND INDEPENDENTLY CONCLUDE SATISFACTORY PERFORMANCE BEFORE COMMERCIALIZING. SUGGESTIONS OF USES SHOULD NOT BE TAKEN AS INDUCEMENTS TO INFRINGE ON ANY PARTICULAR PATENT.