



Composite Solutions... Delivered Daily

Fiberglass Training Seminar at TISC

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The products we used and talked about were:

- **UV surfboard laminating resin**
- **Surfboard epoxy**
- **Surfacing agent**
- **Milled Fibers**
- **Cabosil**
- **10 oz cloth**
- **DBM1708**
- **Marine Laminating resin**
- **Mekp**
- **Gelcoat**
- **Q-cell**
- **7.5 oz cloth**
- **CSM**
- **5.6 oz carbon fiber**

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Composite resource

UV Cure Polyester surfboard laminating resin

Uses:

- Surfboard construction and repair
- Fiberglass and wood boat repair
- Fiberglass auto and rv repair
- Fiberglass skylight construction and repair
- Model making
- Hobbies

Advantages:

- Rapid cure when exposed to uv light
- Meko catalyst not necessary
- Minimum waste
- Long working time

Composite resource uv cure polyester surfboard laminating resin is clear and uv stable. Ideal for surfboard construction and repair. It can also be used where a clear resin is required. This resin does not require the use of mekp catalyst in order to cure. Exposure to direct sunlight or a uv light source will cure the resin completely in 10 minutes. Do not use on styrofoam, not recommended for use on metal surface.

Preparation:

Surface must be clean and dry, free of dirt, dust, oil, wax or grease. Never apply resin in direct sunlight. If applying to a fiberglass or wood surface thoroughly sand entire surface to be coated or fiber glassed. When applying fiberglass to a shaped polyurethane surfboard blank use enough resin to completely wet out the entire length of fiberglass being used.

Mixing:

Because uv cure resin hardens when exposed to direct sun light or a uv light source no mixing is required, it can be used straight from the container. If no uv light source is available mekp catalyst must be used to cure the resin. Add composite resource mekp catalyst to resin and mix thoroughly before applying resin to fiberglass. Use the chart below for proper catalyst to resin ratio. Do not return catalyzed resin to original container.

Application:

Apply resin to surface. It can be poured from the can, and then squeegeed, brushed or rolled. Use the method which best suits the particular application. When applying resin to fiberglass cloth use a squeegee to spread resin and wet out (saturate) cloth it is also an effective tool to remove air bubbles and resin puddles. Once fiberglass is completely saturated, all air bubbles and excess resin have been removed. Expose to sunlight for 10 minutes to cure the resin. On cloudy days the resin will need longer exposure to uv light to complete the cure.

Clean up:

Use composite resource acetone to clean tools and brushes.

Safety:

Always work in a well ventilated area. Wear gloves when working with resin. A respirator is recommended. Dust masks are not effective protection from resin fumes.

Composite Resource

Polyester Marine Laminating Resin

Composite Resource polyester Marine Laminating resin is a moisture resistant, laminating / bonding resin for use with fiberglass cloth, woven roving or chop strand fiberglass matting. Not recommended as a top coat resin. Do not use on Styrofoam, not recommended for use on metal.

Uses:

- Fiberglass boat construction
- Wood and Fiberglass boat repair
- Fiberglass auto and RV repair
- All repairs on fiberglass products
- Fiberglass tub and shower repair
- Model making
- Hobbies

CATALYST QUANTITY CHART			
REVCHEM	RESIN QUANTITY		REVCHEM
Catalyst Concentration	Quart	Gallon	5 Gallons
1/2%	5 cc. 1/6 oz.	20 cc. 2/3 oz.	100 cc. 3-1/3 oz.
1%	10 cc. 1/3 oz.	40 cc. 1-1/3 oz.	200 cc. 6-2/3 oz.
1-1/4%	12.5 cc. 2/5 oz.	50 cc. 1-2/3 oz.	250 cc. 8-1/3 oz.
1-1/2%	15 cc. 1/2 oz.	60 cc. 2 oz.	300 cc. 10 oz.
2%	20 cc. 2/3 oz.	80 cc. 2-2/3 oz.	400 cc. 13-1/4 oz.

ASSUMPTIONS:

1. Resin weight 9.5 pounds per gallon.
2. MEKP specific gravity 1.1
3. Catalyst quantities rounded to the closest convenient unit.
4. These recommendations are based on ambient conditions and industry standards.

Preparation:

Before applying resin to surface to be fiber glassed sand the area with course grit sandpaper. 50 grit is recommended so the resin can bite and bond well to the surface to be repaired. The sanded surface must be clean and dry, free of dirt, dust, oil, wax, grease and paint. Cut the fiberglass reinforcement to completely cover the repair and it place on the sanded area. Use only enough resin that can be applied in 15 minutes.

Mixing:

Add Composite Resource MEKP to the pre-measured resin using the chart below and mix thoroughly before applying. Remember higher temperatures will make the resin harden faster.

Application:

Apply catalyzed resin to the fiberglass reinforcement with a squeegee, brush or paint roller. Use the method which best suites the application. A paint roller is recommended when using chop strand mat, it will help keep the material from fluffing up or coming apart. Once fiberglass is wet out (saturated) remove excess resin and air bubbles using a squeegee for glass cloth, or resin roller for chop strand mat. Additional layers may be applied once the first layer has set. It is not necessary to sand between layers if the previous application has had less than 24 hours to dry.

Clean up:

Use Composite Resource Acetone to clean tools and brushes.

Safety:

Always work in a well ventilated area. Wear gloves when working with resin. A respirator is recommended. Dust masks are not effective protection from resin fumes.



Composite Resource

Surfacing Agent

A styrene based waxed solution that when added to polyester resin will create a tack free surface once the resin has cured.

Instructions:

Surfacing Agent is a wax additive designed to be added to polyester resins or gel coat to create a tack free surface that can be sanded. Once surfacing agent has been used on a surface coat it must be sanded prior to adding additional layers of resin.

Add surfacing agent to resin prior to adding catalyst and mix thoroughly. The ratio of surfacing agent to resin is 2% or 20cc per quart.

Never apply resin that has been mixed with surfacing agent in direct sunlight as the wax will not rise to the surface and it will remain tacky.

Catalyst must be used for the resin to dry. Surfacing agent alone will not cause the resin to harden. Do not use with epoxies.

Safety:

Always work in a well ventilated area. Wear gloves when working with Surfacing agent and polyester resins. A respirator is recommended. Dust masks are not effective protection from resin fumes.

STORAGE:

Do not store or use Surfacing Agent near open flame, furnace areas, pilot lights, stoves or any heat source. Store in a cool dry area. Always keep container closed when not in use. Do not reuse container. Dispose of container in a proper manner. Responsible handling of this chemical can prevent harm to you and the environment.

Composite Resource

Polyester Gel coat

Gel coat is a polyester coating that is applied to the mold surface and becomes an integral part of the finished product. Composite Resource gel coat is available in a wide range of colors. Its function is to protect the fiberglass from the environment. In doing that, it produces cosmetically appealing surfaces that are durable and long lasting. Gel coat can eliminate the need for other finishing.

Preparation:

Surface must be clean, dry, free of oil based paint, oil, wax, dust and other surface contaminants.

GEL COAT / OLD FIBERGLASS: If surface to be coated has been previously coated with gel coat or is an old fiberglass surface. Sand the entire surface to be coated with course sandpaper (50 or 60 grit) and wipe clean. **NEW FIBERGLASS** If fiberglass laminate has cured less than 7 days it can be coated with gel coat with no additional surface preparation other than removing dust or dirt. Test by applying a small amount of acetone to the laminate if the surface feels tacky after the acetone has evaporated gel coat will bond, if it is not tacky it is best to sand the surface. **IN MOLD:** When working on a mold surface make certain mold release or PVA has been applied to the mold prior to the gel coat.

Mixing:

Thoroughly stir gel coat in the can prior to adding styrene, surfacing agent, or catalyst. **GEL COAT / OLD FIBERGLASS / NEW FIBERGLASS** when used as a topcoat over fiberglass add 30cc per quart of surfacing agent to the gel coat and mix thoroughly prior to adding catalyst. After proper mixing is complete, add Composite Resource MEKP catalyst at 2% by volume or 20cc per quart. Mix no more than can be applied in 10 – 12 minutes. **IN MOLD:** Not recommended, but thinning may be necessary to spray gel coat from some equipment, thin if necessary 5-10% with styrene to the desired viscosity. Once proper mixing is complete and desired viscosity achieved add MEKP at 2% by volume or 20cc per quart. Mix no more than can be applied in 10-12 minutes.

Application:

Gel coat can be sprayed, brushed or rolled on most surfaces. Spraying is recommended for in mold use, where the mold surface can be contaminated with a brush or a roller causing the part to stick in the mold. Apply gel coat no less than 12 mils thick or no more than 20 mils thick at one time. If thicker gel coat is required apply 20 mils, let dry to touch and re-coat with an additional 20 mils. If brushed or rolled avoid puddles or thin spots which will create uneven cure. When gel coat is dry to touch, about an hour after application, fiberglass laminate may be applied in the mold. If being used as a topcoat gel coat will be dry to touch in 1 hour and will not feel tacky if properly cured. Never apply gel coat in direct sunlight.

Clean up:

Use Composite Resource Acetone to clean tools and brushes.

Safety:

Always work in a well ventilated area. Wear gloves when working with gel coat. A respirator is recommended. Dust masks are not effective protection from gel coat fumes.

Composite Resource

FUMED SILICA • CABOSIL or AEROSIL

A thickening agent used to increase flow or sag resistant qualities in resin systems. Adding fumed silica to resin has the effect of increasing hardness and will make sanding more difficult. In some applications this can be used as an advantage to create a hard wearing edge or surface. Using fumed silica in resin with other fillers such as Q-cell, micro balloons, or glass bubbles will give the filler mix a non-sag characteristic. Adding it to milled fibers will produce a non sagging structural adhesive.

Warnings:

Dust may be irritating to the respiratory tract.

INGESTION: No hazard expected in normal use.

Always use dust protection when using this product.

(Respirator, Eyes-goggles, Skin-gloves)

COMPOSITION: silicon dioxide / APPEARANCE: white powder / PARTICLE SIZE: 0.012

Composite Resource

MILLED FIBERS • Micro glass

Milled fibers are hammer milled E-glass filaments. They are compatible with polyester, vinyl ester and epoxy resins. When added to a resin they will increase mechanical strengths such as impact, tensile, compressive and flexural. Milled fibers also improve dimensional stability and minimize distortion at elevated temperatures. An excellent filler for high strength applications where no sanding will be required (resin filled with milled fibers does not sand easily).

Warnings:

Dust may cause eye irritation, skin irritation, and inhalation hazard, non-toxic if swallowed. Always use dust protection when using this product. (Respirator, Eyes-goggles, Skin-gloves)

COMPOSITION: E-glass / APPEARANCE: light grey powder / PARTICLE SIZE: 1/32"

Composite Resource

Q-CELL • Hollow quartz microspheres

Q-cell is used as a resin thickener / extender. It is suitable for polyesters, vinyl esters and epoxy resins. Mixed at varying amounts with resin they form a lightweight putty that is easily sanded. Bright white with low water absorption this material is the filler of choice when doing repairs below the waterline and ding repair on surfboards.

Hazards:

Dust may cause eye irritation, skin irritation, inhalation irritation, no known ingestion hazard. Always use dust protection when using this product. (Eyes-goggles, skin-gloves)

COMPOSITION: quartz / APPEARANCE: white powder / PARTICLE SIZE: 0.01