# Scotchcast™ Brand Liquid Electrical Insulating Resins

## Mixing and Handling Instructions

These guidelines should be used for all Scotchcast Liquid Electrical Resin 2-part systems.

### Mixing

The following steps must be taken to insure the proper use and to obtain the optimum inherent properties of this resin system.

1. The part A and B may be preheated to 50-60°C to aid in mixing. Do not heat above these temperatures for over 5 to 10 minutes as this can possibly cause a tacky surface.

2. The part A and part B must be thoroughly mixed to insure that no separation of filler or other ingredients remain.

3. Combine the parts in the proper ratio to ± 2% by weight or volume.

4. Mix the combined parts thoroughly using a high speed and high shear mixer (1000 to 1600 rpm using a Cowells high shear mixer or equivalent). Mixing should continue for 4-6 minutes with power mixer. Mixing may be done by hand, but the results may not be consistent. **Mixing is the most important part of getting the most out of the resin system**. Most problems are due to incomplete mixing and failure to scrape the sides and bottom of the mixing container. The sides and bottom should be scraped and forced into the bulk of the mixture several times during the mixing process. If this is not done the units filled with resin from this portion of the container will have soft spots and sticky areas. **Incomplete mixing can result in thermal shock failures and less than maximum electrical properties.**

### Deaerating

Air introduced during mixing can be removed by evacuating for 5 to 15 minutes at 5 to 10 mm of mercury absolute pressure (above 29.5 inches on typical dial gauge). Warming the resin to 60°C (140°F) aids air removal. The container sidewalls should be about four times the height of the liquid resin to contain the foaming that takes place in vacuum.

### Casting and Impregnating

Pour the warm resin into the preheated 50-100°C mold. If no mold is used, dip the preheated part into the resin. Heating the resin and mold aids in impregnation by reducing the viscosity significantly. For maximum impregnation, evacuate for 5 to 15 minutes at 5 mm mercury absolute pressure (29.5 inches on typical dial gauge), or pour in vacuum and hold for several minutes before releasing vacuum.

### Curing

Where minimum stress and maximum shock resistance are required, the lower temperature cure cycle is suggested. Time should be added to the cure cycle times to allow the resin to reach the curing temperature. An additional post cure of 8-16 hours at 110-120°C will optimize thermal shock resistance and electrical properties regardless of the initial cure temperature.

### Storage

The resin system has a minimum shelf life of two years from date of manufacture. Both parts should be stored in a cool, dry place. When not in use, containers should be kept tightly closed.

## Important Notice

Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use.

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