



### **RECOMMENDED CURE SCHEDULE**

Always allow tools made with ADTECH high temperature systems to gel at room temperature before subjecting them to the post cure. 24 hours is recommended. This will prevent excessive exotherm and shrinkage from occurring. The recommended post cure schedule for the EC-440 system is as follows:

- ◆ Cure for 24 hours at room temperature (25°C/77°F)
- ◆ Heat cure on the model, if possible, for 8 hours at 66°C/150°F

### **HEAT CONDITIONING OF METAL REINFORCED, CAST EPOXY MOLDS**

It is always advisable to heat cure cast epoxy molds internally on the model to 66°C/150°F using the temperature control system built into your mold (i.e. copper tubing or electrical grid).

If oven curing is your only option, it is advisable to complete an initial cure on the model at 52°C/125°F for 6-8 hours or overnight before increasing the oven temperature.

Extremely large cast molds should always be heat cured internally and should not be moved or transported to another location prior to an internal heat cure process of 66°C/150°F.

### **RATES FOR HEATING AND/OR COOLING OF CAST EPOXY MOLDS**

When taking tools through the post cure phase, always place in a room temperature oven and increase the temperature at a rate of no more than 13°C/25°F per hour. When cooling, allow the tools to remain in the heated environment and decrease the temperature at a rate of no more than 27°C/50°F per hour. Never remove the tool from the oven until it has reached 38°C/100°F. Removing a tool heated above 38°C/100°F can result in thermal shock and warping. Ensure proper curing temperatures are met by installing a thermocouple directly in the center of the tool.

### **MATERIAL ESTIMATOR**

The mixed density of EC-440 at the appropriate mix ratio (by weight) of 100 parts resin: 30 parts hardener: 208 parts N-61 Fine Bulk Filler: 750 parts N-6 Chipped Bulk Filler is 21.7 lbs./gallon or 162.3 lbs./cu. ft. To determine the volumetric yield for EC-440, calculate the amount of cubic feet that will be cast and multiply this number by 162.3. For assistance on a material estimation for a specific application, please contact our Technical Service Department

### **CRYSTALLIZATION**

Epoxyes may form small crystals when exposed to moisture, dirt, low temperatures, or temperature cycling. To return the material back to its original state, heat to 55°C/130°F and stir until the crystals disappear. **Do not use an epoxy if the crystals will not return to liquid form.**

### **PACKAGING**

EC-440 resin & hardener is available in the following kit sizes:

#### ◆ 5 Gallon Pail Kits

*Recommended filler quantities per 5-gallon pail kit of resin & hardener:*

- ◆ 2 pails (41.6 lbs each) N-61 Fine Grain Filler
- ◆ 6 pails/bags (50 lbs each) N-6 Coarse Bulk Filler

***A 5 gallon pail kit plus the recommended fillers yields 2.68 cubic feet of cast material***

#### ◆ 55 Gallon Drum Kits

*Recommended filler quantities per 55-gallon drum kit of resin & hardener:*

- ◆ 66 bags (50# each) of N-6 Chipped Bulk Filler
- ◆ 22 pails (41.6# each) of N-61 Fine Bulk Filler

***A 55 gallon drum kit plus the recommended fillers yields 29.5 cubic feet of cast material***

EC-440 Tech/Revised 5/20/10  
Supersedes 12/13/06