EPOXIES
INNOVATIVE BONDING SOLUTIONS ETC.

TECHNICAL BULLETIN

70-3810
HIGH TEMPERATURE RESISTANT ALUMINUM FILLED EPOXY RESIN

DESCRIPTION:

70-3810 is a low viscosity, aluminum filled epoxy casting and tooling resin. This system is used for making heat resistant cast tools or parts that require high heat resistance and thermal conductivity. 70-3810 utilizes a *new polymer resin* that offers better heat resistance than most commercially available systems. This material has excellent adhesion to most substrates and is therefore often used as an adhesive.

70-3810 is easily machined, drilled, tapped, or polished and is ideal for vacuum form molds, dies, drill jigs, injection molds, fixtures, stampings, foundry patterns, etc...

TYPICAL SPECIFICATIONS:

Color	Aluminum
Viscosity, @ 25°C, cps	15,000
Shrinkage linear, in/in, 3/4 lb.	0.003
Hardness, shore D	87
Specific gravity, 25°C	1.66
Tensile strength, psi	14,500
Compressive strength, psi	31,600
Flexural strength, psi	12,500
Thermal conductivity, btu/hr/in	12.5
Thermal expansion co-efficient, °C	4.5×10^{-6}
Operating temperature range, °C	-75 to 300
Water absorption, 24 hours	0.005%

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INSTRUCTIONS FOR USE:

A. HEAT CURING WITH CATALYST #30:
   1. By weight, thoroughly mix 8.5 parts Catalyst #30 to 100 parts 70-3810 Epoxy.
   2. Pour a thin stream of material into lowest part of the mold and continue until completely flooded, this greatly minimizes air entrapment.
   3. Heat cure for 2 hours at 175°F and post cure for 3 hours at 300°F.

B. ROOM TEMPERATURE CURING WITH CATALYST #23:
   1. By weight, thoroughly mix 12 parts Catalyst #23 to 100 parts 70-3810 Epoxy.
   2. Pour a thin stream of material into lowest part of the mold and continue until completely flooded, this greatly minimizes air entrapment.
   3. Cure overnight at room temperature or with mild heat (90-110°F). Post cure for two hours at 200°F for best results.

AVAILABILITY:

70-3810 is available in pre-measured quart, gallon, and five gallon pail kits. When using pre-measured kits, no weighing or measuring is necessary. Just add the contents of the pre-weighed curing agent container to the resin container.

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