Starting Formulation

SF 7003

Rapid Curing Potting Compound
EPON™ Resin 828 / HELOXY™ Modifier 62 / EPIKURE™ Curing Agent 3271

Introduction
This thermal shock resistant, epoxy compound is designed for potting preheated assemblies. It cures to handling strength in 2 to 3 minute cycles. Maximum properties, including 150 °C heat resistance, are achieved following a post cure of 60 minutes at 125 °C.

Formula

Material | Supplier | Pounds | Gallons
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Resin Portion
EPON Resin 828 | Hexion | 83 | 8.60
HELOXY Modifier 62 | Hexion | 17 | 1.87
DC-200 Fluid, 100 centistoke grade | Dow-Corning Corp. | 0.007 | 0.0001
Novacite 325 Silica | Malvern Minerals | 130 | 5.89
1/16-inch Milled Glass with epoxy compatible finish | Owens-Corning Fiberglass | 4 | 0.19

Converter Portion
EPIKURE Curing Agent 3271 | Hexion | 11.4 | 1.33
Aromatic Amine Eutectic | 7.6 | 0.81

A 60/40 blend of para, para'-diaminodiphenylmethane and metaphenylenediamine.

Compounding
Resin Portion – Blend EPON Resin 828, HELOXY Modifier 62, and DC-200 air release agent to a homogeneous liquid under moderate speed agitation. Add the Novacite filler and milled glass and disperse thoroughly under high shear agitation.

Converter Portion – Preheat the aromatic amine eutectic to between 50 and 60 °C and agitate in the original container to redissolve any crystallized portion and restore the mixture to a homogeneous state. Combine with EPIKURE 3271 Curing Agent, blending under moderate speed agitation to a uniform composition. Store in tightly sealed metal or polyolefin plastic containers.

Potting Procedure
Preheat the resin portion to 55 °C or higher for convenient pumping and handling. Proportion and mix the resin and converter in mechanical metering and dispensing equipment. The resin/converter ratio is 12.3:1 by weight and 7.7:1 by volume.

Preheat the mold cavity to 125 °C and fill with the mixed compound. Maintain the temperature for 2 to 3 minutes, then grind off any overfill. Post cure the units for 60 minutes at 125°C to develop maximum thermal and physical strength properties.

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Storage

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