

## ER2162 Epoxy Resin

Product Code: ER2162

### PRODUCT DESCRIPTION

Epoxy **ER2162** is a two-part flame retardant epoxy with excellent solvent resistance.

The rigid and inert nature of this encapsulant lends itself ideally to the protection of electrical/electronic units with frequent or complete immersion in such solvents as diesel fuel, leaded and unleaded petrol, water and cellulose thinners.

The standard colour is black although other colours are available on request. The System can be supplied in both bulk or resinpacks.

### PRODUCT USE

If in Resinpack form, resin and hardener are mixed by removing the clip (grip each end of the pack and pull gently) and moving the contents around inside the pack until thoroughly mixed. Take special care to push unmixed material from the corners. Mixing normally takes from two to four minutes depending on the skill of the operator. Resin and hardener are evacuated prior to packing so the system is ready for use immediately after mixing. The corner may be cut from the pack so that it may be used as a simple dispenser.

If in bulk form the resin and hardener are mixed in the ratio:

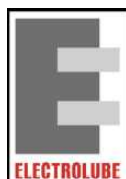
13.67 : 1 by weight  
7.93 : 1 by volume

Sedimentation of the resin has been minimised by careful attention to formulation. However, any sediment which may have formed over long time periods in bulk resin must be dispersed before removal of ANY material from the container. This dispersion can be carried out if necessary by stirring with a broad bladed spatula or gently rolling the can. Take care not to introduce excessive amounts of air during this operation, or it may be necessary to re-evacuate the resin. Sedimentation will be accelerated by storage at high temperatures so avoid this.

TECHNICAL  
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When mixing resin and hardener, once again avoid introducing excessive amounts of air. Automatic mixing equipment is available from Design Resins which will accurately mix resin and hardener in the correct proportions without introducing air.

Bulk material or Resinpacks must be thoroughly mixed before use - incomplete mixing will result in erratic or even partially incomplete cure.

Cure the **ER2162** system for at least:

24 hours @ 25°C  
or 4 hours @ 60°C  
or 1 hour @ 100°C

Do not hot cure large volumes immediately - allow these to gel at room temperature and post-cure at high temperature if desired. Small volumes may be hot cured immediately.

### PROPERTIES OF SYSTEM (@20°C)

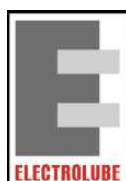
Usable Life (for 150g sample)	35 minutes
Gel Time (for 150g sample)	40 minutes
Density of Resin	1.77 g/ml
Density of Hardener	1.03 g/ml
Density of Mixed System	1.69 g/ml
Viscosity of Resin	30,500 cps
Viscosity of Hardener	360 cps

### PROPERTIES OF CURED SYSTEM

Specific Gravity	1.75
Shore Hardness	>D80
Tensile Strength	70 MPa
Compressive Strength	90 MPa
Deflection Temperature	95°C
Coefficient of Expansion	40 ppm/°C
Electric Strength	10 kV/mm
Loss Tangent @ 50 Hz	0.04 @ 25°C
Permittivity @ 50 Hz	4.0 @ 25°C
Volume Resistivity	10 <sup>15</sup> ohm-cm

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### HEALTH & SAFETY NOTES

#### **Cleaning**

It is far easier for machines & containers to be cleaned before the resin has been allowed to cure. Electrolube's RRS is suitable for cleaning machines and containers and cured resin may be slowly softened and removed by soaking in our RRS.

Resinpacks stored in a warm dry place have a shelf life of at least 12 months. Bulk material stored in suitable closed containers will have a shelf life of at least two years. The hardener will deteriorate on exposure to atmospheric moisture and carbon dioxide and hence containers should be kept sealed.

Both **ER2162** resin and hardener can cause dermatitis on repeated contact the hardener is also characterised as "corrosive". Skin contact must be avoided by use of gloves and overalls. Eye protection is also necessary. Any resin contamination should be washed from the skin immediately. Take care not to contaminate food-stuffs.

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