ER1137
Epoxy Resin

ER1137 is a low viscosity, hot or cold curing resin with superior adhesive properties. The cured material is tough however flexibility can be adjusted by altering the amount of hardener used. Increasing the amount of hardener will produce a more flexible product and decreasing the amount of hardener will produce a more rigid product. However, this should only be carried out after careful testing.

- Excellent adhesion to a wide variety of substrates
- Excellent electrical properties and wide operating temperature range
- Long useable life and low mixed system viscosity; facilitates ease of application
- Versatile product; can adjust hardener level to meet a range of flexibility requirements

Approvals	**RoHS Compliant (2015/863/EU):**	**Yes**
	UL Approval:	**No**

Typical Properties

Liquid Properties:	Base Material	Epoxy
	Density Part A - Resin (g/ml)	1.13
	Density Part B - Hardener (g/ml)	0.94
	Part A Viscosity (mPa s 20-25°C)	1000
	Part B Viscosity (mPa s 20-25°C)	200
	Mixed System Viscosity (mPa s 20-25°C)	700
	Mix Ratio (Weight)	2 :1
	Mix Ratio (Volume)	1.66 :1
	Usable Life (20°C)	2-4 hours
	Gel Time (25°C)	6 hours
	Cure Time (25 °C)	48 hours
	Cure Time (80 °C)	1 hours
	Cure Time (100 °C)	30 minutes
	Colour Part A - Resin	Black
	Colour Part B - Hardener	Amber
	Storage Conditions	Dry Conditions: Above 15ºC, Below 35ºC
	Shelf Life	24 Months

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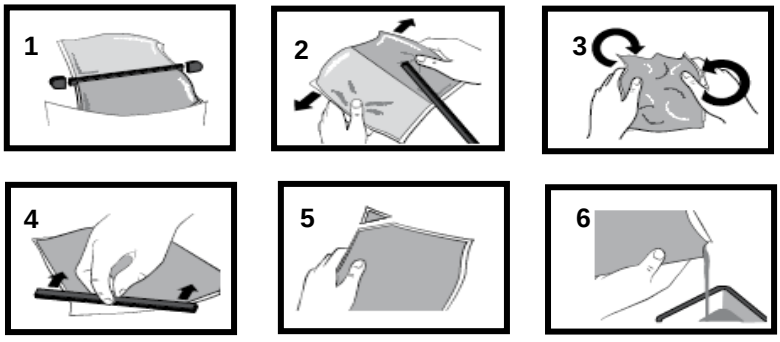
Cured System:	Thermal Conductivity (W/m.K)	0.20
	Cured Density (g/ml)	1.06
	Temperature Range (°C)	-40 to +120
	Max Temperature Range (Short Term (°C)/30 Mins) (Application and Geometry Dependent)	+130
	Dielectric Strength (kV/mm)	12
	Volume Resistivity (ohm-cm)	10^{14}
	Shore Hardness	D80
	Colour (Mixed System)	Black
	Flame Retardancy	No
	Tensile Strength (kg/mm^2)	180
	Compressive Strength (MPa)	90
	Deflection Temperature (°C)	35
	Coefficient of Expansion (ppm/°C)	100
	Loss Tangent @ 50 Hz	0.01
	Permittivity @ 50 Hz	4.5
	Comparative Tracking Index	Not Measured
	Water Absorption (9.7mm thick disk, 51mm diameter) 10 days @ 20ºC / 1 hour @ 100ºC	0.9% / 1.5%
	Elongation At Break	2.5%

Mixing Procedures

Resin Packs

When in Resin pack form, the resin and hardener are mixed by removing the clip and moving the contents around inside the pack until thoroughly mixed. To remove the clip, remove both end caps, grip each end of the pack and pull apart gently. By using the removed clip, take special care to push unmixed material from the corners of the pack. Mixing normally takes from three to four minutes depending on the skill of the operator and the size of the pack. Both the 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. There is also a YouTube video (Epoxy Mixing Instructions) available on the Electrolube channel to show the mixing process.



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Bulk Mixing
When mixing, care must be taken to avoid the introduction of excessive amounts of air. Automatic mixing equipment is available which will not only mix both the resin and hardener accurately in the correct ratio but do this without introducing air. Containers of Part A (Resin) and Part B (Hardener) should be kept sealed at all times when not in use to prevent the ingress of moisture. Bulk material must be thoroughly mixed before use. Incomplete mixing or use of the wrong mix ratio will result in erratic or partial curing.

Additional Information

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.

Storage: When storing under very cold conditions, the hardener may crystallise. If this occurs, simply warm (40°C) the container gently until all crystals have re-melted.

Health & Safety: Always refer to the Health & Safety data sheet before use. These can be downloaded from www.electrolube.com

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