

ER1455 Chemically Resistant Epoxy Resin

ER1455 is a two part epoxy encapsulation resin offering high resistance to a wide variety of chemicals, including solvents and fuels. The resin offers a 100% reactive system and does not contain any solvents or unreactive diluents, thus offering the highest level of performance in harsh chemical and high temperature environments.

- High chemical resistance; ideal for protecting electronics exposed to solvents and fuels
- Good adhesion to a wide variety of substrates
- Wide operating temperature range; good thermal resistance
- Can be cured at ambient temperature or accelerated using heat

Approvals **RoHS-2 Compliant (2011/65/EU):** **Yes**

Typical Properties

Liquid Properties:	Base Material	Epoxy
	Density Part A - Resin (g/ml)	1.20
	Density Part B - Hardener (g/ml)	1.10
	Part A Viscosity (mPa s @ 23°C)	11000
	Part B Viscosity (mPa s @ 23°C)	1100
	Mixed System Viscosity (mPa s @ 23°C)	3300
	Mix Ratio (Weight)	3.57:1
	Mix Ratio (Volume)	3.27:1
	Usable Life* (23°C)	20 mins
	Gel Time* (23°C)	22 mins
	Cure Time* (23°C)	24 hours
	Cure Time* (80 °C)	2 hours
	Colour Part A - Resin	Black
	Colour Part B - Hardener	Straw
	Storage Conditions	Dry Conditions: Above 15°C, Below 30°C
	Shelf Life	24 Months (bulk) 18 months (resin pack)
	Exotherm* (50g Sample)	< 85°C
	Shrinkage*	<1%

* Application and geometry dependant

Copyright Electrolube 2013

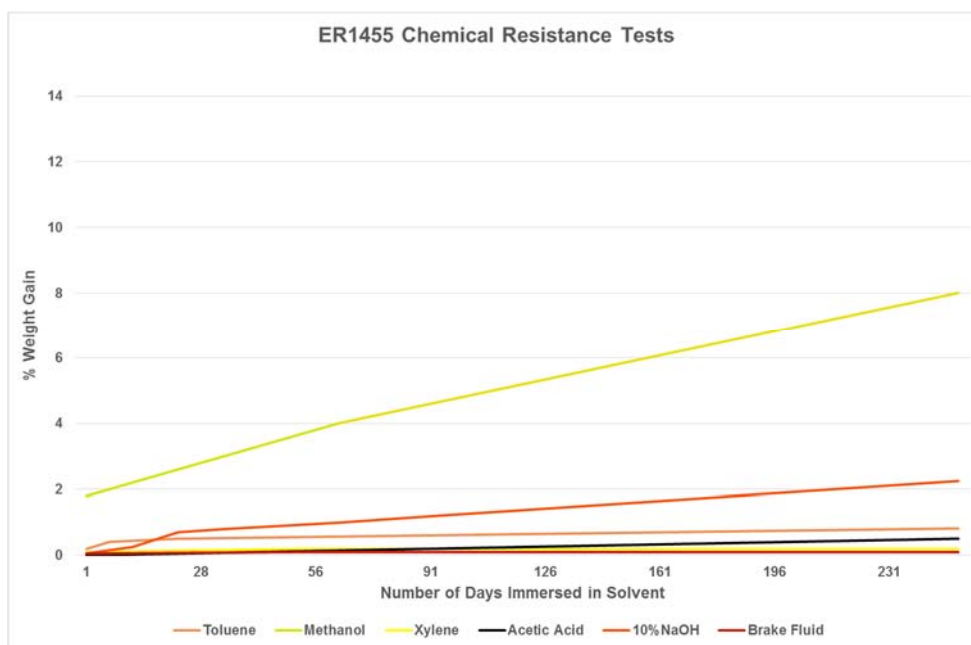
All information is given in good faith but without warranty. Properties are given as a guide only and should not be taken as a specification.

Electrolube cannot be held responsible for the performance of its products within any application determined by the customer, who must satisfy themselves as to the suitability of the product.

Ashby Park, Coalfield Way,
Ashby de la Zouch,
Leicestershire LE65 1JR
T +44 (0)1530 419 600
F +44 (0)1530 416 640
BS EN ISO 9001:2008
Certificate No. FM 32082

Cured System:	Thermal Conductivity (W/m.K)	0.20
	Cured Density (g/ml)	1.17
	Temperature Range* (°C)	-50 to +150
	Max Temperature Range* - Short Term (°C)	+170
	Dielectric Strength (kV/mm)	10
	Volume Resistivity (ohm-cm)	10 ¹²
	Shore Hardness	D80
	Colour (Mixed System)	Black
	Flame Retardancy	No
	Water Absorption (9.7mm thick disk, 51mm diameter) 10 days @ 20°C / 1 hour @ 100°C	< 0.25% / < 0.5%
	Chemical Resistance	Further information available upon request

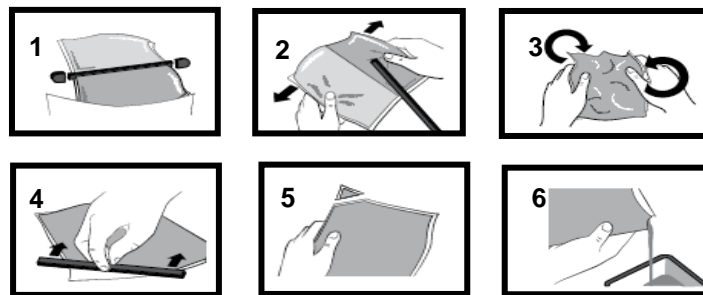
*Temperature ranges are given as guidance only; application and geometry dependent, use at higher temperatures may be possible



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 two 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.



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 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.
- Curing:** Do not heat cure large volumes immediately. Allow these to gel at room temperature and post-cure at high temperature if required (refer to liquid properties for details). Small volumes (250ml) may be heat cured immediately.
- 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

Revision 0: Oct '14