

## ER1426 Epoxy Resin

ER1426 is a very low viscosity unfilled, two-part epoxy resin, designed for powder bonding and impregnation applications. The standard colour is water-white but other colours could be made available if required.

- Exceptionally low viscosity; ideal for applications with complex geometries and small spacing
- Clear system; allows visual inspection through the encapsulation resin
- High tensile strength; good mechanical protection
- Long useable life; ideal for impregnation applications

|                   |                                      |            |
|-------------------|--------------------------------------|------------|
| <b>Approvals:</b> | <b>RoHS Compliant (2015/863/EU):</b> | <b>Yes</b> |
|                   | <b>UL Approval:</b>                  | <b>No</b>  |

### Typical Properties

|                    |                                                                                         |                                        |
|--------------------|-----------------------------------------------------------------------------------------|----------------------------------------|
| Liquid Properties: | Base Material                                                                           | Epoxy                                  |
|                    | Density Part A - Resin (g/ml)                                                           | 1.05                                   |
|                    | Density Part B - Hardener (g/ml)                                                        | 0.92                                   |
|                    | Part A Viscosity (mPa s 23°C)                                                           | 200                                    |
|                    | Part B Viscosity (mPa s 23°C)                                                           | 25                                     |
|                    | Mixed System Viscosity (mPa s 23°C)                                                     | 100                                    |
|                    | Mix Ratio (Weight)                                                                      | 4.00:1                                 |
|                    | Mix Ratio (Volume)                                                                      | 3.40:1                                 |
|                    | Usable Life (20°C)                                                                      | 120 minutes                            |
|                    | Cure Time (40 °C)                                                                       | 24 hours                               |
|                    | Cure Time (60 °C)                                                                       | 8 hours                                |
|                    | Cure Time (100 °C)                                                                      | 2 hours                                |
|                    | Colour Part A - Resin                                                                   | Water White                            |
|                    | Colour Part B - Hardener                                                                | Water White                            |
|                    | Storage Conditions                                                                      | Dry Conditions: Above 15°C, Below 35°C |
|                    | Shelf Life                                                                              | 24 Months (Resin packs – 12 months)    |
| Cured System:      | Cured Density (g/ml)                                                                    | 1.05                                   |
|                    | Temperature Range (°C)                                                                  | -40 to +120                            |
|                    | Max Temperature Range (Short Term (°C)/30 Mins)<br>(Application and Geometry Dependent) | +140                                   |
|                    | Dielectric Strength (kV/mm)                                                             | 11                                     |
|                    | Volume Resistivity (ohm-cm)                                                             | 10 <sup>14</sup>                       |

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Ashby Park, Coalfield Way,  
Ashby de la Zouch,  
Leicestershire LE65 1JR

**T** +44 (0)1530 419 600

**F** +44 (0)1530 416 640

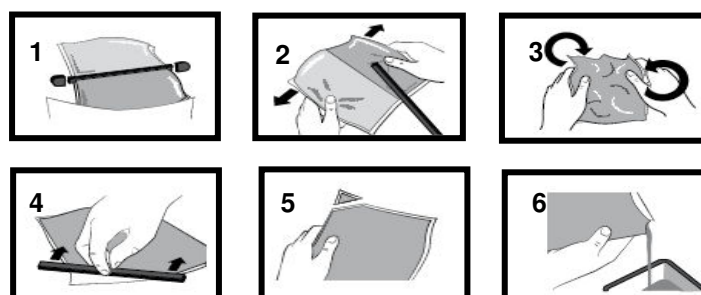
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|                                   |             |
|-----------------------------------|-------------|
| Shore Hardness                    | D85         |
| Colour (Mixed System)             | Water White |
| Flame Retardancy                  | No          |
| Tensile Strength (MPa)            | 70          |
| Tensile Modulus (MPa)             | 3000        |
| Flexural Strength (MPa)           | 100         |
| Deflection Temperature (°C)       | 90          |
| Coefficient of Expansion (ppm/°C) | 100         |
| Power Factor (@ 25°C)             | 0.03        |
| Permittivity @ 50 Hz (@ 25°C)     | 4.0         |

## **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.



### **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](http://www.electrolube.com)

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