



## Product Information

### Resin

EC 157

### Hardener

W 152 XLR

### Mixing ratio by weight

100:30

**Description:** High performance epoxy infusion resin, its very low viscosity allows the resin to quickly infuse the fibres from thin to very thick laminates. This epoxy infusion resin from Elantas is suitable for use with carbon fibre, glass fibre and aramid / kevlar. The range of hardeners available from high reactivity to extra low reactivity allow a large range of desired pot life's / gel times to be achieved. This infusion resin will cure at room temperature, although it is recommended that a post cure is done at a higher temperature to obtain the best mechanical performance from the resin. As well as its high mechanical properties this resin cures clear so it is suitable for both structural and cosmetic applications.

### Uncured Properties

|                         | Resin (EC157)    | Hardener (W152XLR) |
|-------------------------|------------------|--------------------|
| <b>Colour</b>           | Clear            | Various Colours    |
| <b>Viscosity @ 25°C</b> | 500 – 600 mPas   | 10 - 30 mPas       |
| <b>Density @ 25°C</b>   | 1.13 – 1.17 g/ml | 0.90 – 0.95 g/ml   |

### Cured Properties

|                                 |                     | EC 157 / W 152 XLR              |
|---------------------------------|---------------------|---------------------------------|
| <b>Density @ 25°C</b>           |                     | 1.12 – 1.16 g/ml                |
| <b>Hardness @ 25°C</b>          |                     | 84 - 88 Shore D/15              |
| <b>Glass transition (Tg)</b>    | 24h TA + 16h @ 50°C | 64 - 70 °C                      |
|                                 | 24h TA + 15h @ 80°C | 82 - 88 °C                      |
| <b>Maximum Tg</b>               | 15h 90 °C           | 82 - 88 °C                      |
| <b>Flexural strength</b>        |                     | 102 – 116 MN/m <sup>2</sup>     |
| <b>Maximum strain</b>           |                     | 4.5 – 7.0 %                     |
| <b>Strain at break</b>          |                     | 10 – 14 %                       |
| <b>Flexural elastic modulus</b> |                     | 2.900 – 3.300 MN/m <sup>2</sup> |
| <b>Tensile strength</b>         |                     | 68 – 76 MN/m <sup>2</sup>       |
| <b>Elongation at break</b>      |                     | 5.5 – 8.5 %                     |
| <b>Compressive strength</b>     |                     | 78 – 86 MN/m <sup>2</sup>       |



### Processing Data:

|                 | Pot Life @ 25°C<br>(50mm / 200ml) | Exothermic Peak @ 25°C<br>(50mm / 200ml) | Gelation Time @ 25°C |                   |
|-----------------|-----------------------------------|--|----------------------|-------------------|
|                 |                                   |  | Tack Start<br>(1mm)  | Tack End<br>(1mm) |
| EC157 / W152XLR | 135 – 165 minutes                 | 155 °C – 170 °C                          | 10h – 11h            | 14h – 15h         |

### How to use:

Mix 100 parts resin to 30 parts of hardener by weight, this is very important as with all epoxies incorrect mixing ratios will result in a very poor cure of the resin.

Mix thoroughly for at least a minute.

This epoxy system is highly reactive and once mixed will start to exotherm, start infusion of the part as soon as the resin has been properly mixed.

### Demoulding Information

|                 | EC157 / W152 XLR     |
|-----------------|----------------------|
| Temperature     | @ 25 °C (15ml / 6mm) |
| Demoulding Time | 36 – 48h             |

### Cure / Post Cure Information:

Cristex' epoxy infusion system will cure at room temperature, after demoulding it will take several days for the cure to complete. In order to achieve the best mechanical properties from the resin a post cure is recommended. For most applications a post cure at 50°C is enough however by slowing down the ramp rate or increasing the part cure temperature to 80°C or 90°C this will improve the mechanical performance of the finished part.

### Storage

Epoxy resins and hardeners have a shelf life of two years in the original sealed containers stored in a cool, dry place. The hardeners are moisture sensitive, therefore it is good practice to close the vessel immediately after each use.

### Handling precautions

Refer to the safety data sheet and comply with regulations relating to industrial health and waste disposal.

*Disclaimer:* The information given in this publication is based on the present state of our technical knowledge, buyers and users should make their own assessments of our products under their own application conditions.