# ER 38

## Description

Is formulated HOTMELT epoxy resin, specifically designed for prepreg system with LONG SHELF LIFE and GOOD TACK. It is a very versatile matrix which could be pre-impregnated into carbon, glass, aramid or basalt fibers and is allowing a range of processing temperatures.

# SYSTEM CURING CONDITIONS

ER 38 UV

| Curing Temp. | Gel Time | Curing Time | Tg – DMA (2K/min.) |
|---|---|---|---|
| 100 °C | 22 min. | 120 min. | 130 °C +-5 |
| 120 °C | 6 min. | 60 min. | 130 °C +-5 |
| 130 °C | 5 min. | 45 min. | 130 °C +-5 |

- COLOUR: transparent
- DENSITY: 1,2 g/cm$^3$

### Typical autoclave cure cycle

1. Apply the full vacuum (approx. 0,9 bar).
2. Apply 1 - 7 bar gauge autoclave pressure.
3. Heat at 2 - 4 °C/min. to 100-130°C
4. Hold at 100-130°C for 45 - 120min.
5. Cool at 2 - 5 °C/min.
6. Vent autoclave pressure when a part reaches 65 °C or below.

Cure cycles can be used, pressure 1 - 7 bar, heat up rate 2 - 4 °C/min., cooling rate 2 - 5 °C/min.

# STORAGE and HANDLING

- Shelf life[1]: 12 months
- Out life[2]: > 4 weeks

[1] Shelf Life: the maximum storage life for prepreg, upon receipt by the customer, when stored continuously, in a sealed moisture-proof packing, at -18°C/0°F.

[2] Out life: the maximum accumulated time allowed at room temperature (23°C) between removal from the freezer and cure.

Prepreg should be stored as received in a cool dry place or in a refrigerator. After removal from refrigerator storage, prepreg should be allowed to reach room temperature before unpack which preventing condensation. (A full reel in its packing can take up to 48 hours).

# FLEXURAL TEST (resin)

(ISO 178) Tested at 23°C
Cure cycle: 60min at 120°C

| | |
|---|---|
| Flexural strength | 150 MPa |
| Flexural modulus | 3 100 N/mm$^2$ |

# HANDLING PRECAUTIONS

### Safety precautions at workplace

| | |
|---|---|
| Protective clothing | yes |
| Gloves | essential |
| Arm protectors | recommended when skin contact likely |
| Goggles/safety glasses | yes |

**Skin protection**

| | |
|---|---|
| Before starting work | Apply barrier cream to exposed skin |
| After washing | Apply barrier or nourishing cream |

### Cleansing of contaminated skin

Dab off with absorbent paper, wash with warm water and alkali-free soap, then dry with disposable towels. Do not use solvents.

### Disposal of spillage

Soak up with sawdust or cotton waste and deposit in plastic-lined bin.

# FIRST AID

Contamination of the eyes by resin, hardener or mix should be treated immediately by flushing with clean, running water for 10 to 15 minutes. A doctor should then be consulted.

Material smeared or splashed on the skin should be dabbed off, and the contaminated area then washed and treated with a cleansing cream (see above). A doctor should be consulted in the event of severe irritation or burns. Contaminated clothing should be changed immediately.

Anyone taken ill after inhaling vapors should be moved out of doors immediately.

In all cases of doubt call for medical assistance.