

**CAUTION IN CURE**

It is recommended that gel time should be checked in the customer's plant, as storage, temperature, humidity and catalyst will produce different gel time from that mentioned. The catalyst level should not exceed 2.5 % or fall down below 0.7 % for proper cure. Recommended range is within 0.7 % ~ 2.0 % with 1.0 % at 25 °C being ideal. This product should not be used when temperature is below 15 °C, as curing may be adversely affected.

**GEL TIME DATA**

MEK Peroxide : 1% DDM-N (Humidity 20~30%)

Temperature	15 +/- Minutes	30 +/- Minutes
15°C/59°F	0.4phr 8% Co-Oct. 0.05phr DMA	0.2phr 8% Co-Oct. 0.05phr DMA
20°C/68°F	0.3phr 8% Co-Oct. 0.05phr DMA	0.15phr 8% Co-Oct. 0.05phr DMA
25°C/77°F	0.15phr 8% Co-Oct. 0.05phr DMA	0.1phr 8% Co-Oct. 0.04phr DMA
30°C/86°F	0.15phr 8% Co-Oct. 0.03phr DMA	0.1phr 8% Co-Oct. 0.01phr DMA
35°C/95°F	0.2phr 8% Co-Oct.	0.05phr 8% Co-Oct.

Temperature	45 +/- Minutes	60 +/- Minutes
15°C/59°F	0.15phr 8% Co-Oct. 0.04phr DMA	0.15phr 8% Co-Oct. 0.03phr DMA
20°C/68°F	0.1phr 8% Co-Oct. 0.05phr DMA	0.06phr 8% Co-Oct. 0.05phr DMA
25°C/77°F	0.05phr 8% Co-Oct. 0.05phr DMA	0.04phr 8% Co-Oct. 0.05phr DMA
30°C/86°F	0.05phr 8% Co-Oct. 0.05phr DMA	0.03phr 8% Co-Oct. 0.05phr DMA
35°C/95°F	0.03phr 8% Co-Oct.	0.02phr 8% Co-Oct.

**Bisphenol-A Epoxy Vinyl Ester Resin**

**APPEARANCE**

- Clear transparent liquid resin

**MAIN RESIN CHARACTERISTICS**

- Bisphenol-A epoxy vinyl ester resin
- Medium viscous, medium reactive
- Lighter color with less foaming
- Controlled exotherm

**MOLDING INFORMATION**

- Versatile use for hand lay and spray laminates
- Filament winding / Pultrusion

**MAIN APPLICATION**

- Industrial parts with high chemical resistance
- Pipes, tanks, containers and floors

**LIQUID RESIN PROPERTIES**

- |                                   |                                                                         |
|-----------------------------------|-------------------------------------------------------------------------|
| Specific gravity at 25 °C         | : 1.05 ~ 1.10 approx.                                                   |
| Viscosity at 25 °C                | : 250 ~ 450 cps                                                         |
| B/F LV series spindle No.3, 60rpm |                                                                         |
| Solid content                     | : 57 ~ 60 %                                                             |
| Flash point                       | : 34 °C                                                                 |
| Moisture                          | : below 0.05%                                                           |
| Reactivity at 25 °C               |                                                                         |
| - Catalyst system                 | : 0.15 pbw of 8% Co-Oct.<br>0.05 pbw of DMA<br>1.0 pbw of Luperox DDM-N |
| - Resin quantity                  | : 50g                                                                   |
| - Gel time                        | : 15 ~ 25 min                                                           |
| - Gel to peak                     | : 15 ~ 25 min                                                           |
| - Peak exotherm                   | : 140 ~ 165°C                                                           |

**TYPICAL CURED CAST RESIN PROPERTIES<sup>1)</sup>**

Mechanical properties

Barcol hardness (934-1) : 40

Tensile as per ASTM D 638

- Tensile strength : 85 MPa  
- Tensile modulus : 3960 MPa  
- Elongation at break : 4.0 %

Flexural as per ASTM D 790

- Flexural strength : 148 MPa  
- Flexural modulus : 3570 MPa

Thermomechanical properties

- HDT as per ASTM D 648 : 108 °C

1) Post-cure condition: at 80 °C for 2hrs, 120 °C for 1hr.

**APPLICATION (TYPICAL LAMINATE)**

Internal surface in contact with Chemicals

Layers for chemical resistance:

- CR barrier : surface mat around 10%
- Support barrier : chopped strand mat 20~30%

Layers for reinforcement

- Structural laminates :  
chopped strand mat + woven roving 30~40%

Exterior surface

**SHELF LIFE**

Unpromoted resin 6 months when stored in original sealed containers below 25°C, away from direct heat, sunlight and rain.