



EPM301 TOUGHENED EPOXY PREPREG

EPM301 is a toughened, fire retardant epoxy prepreg system designed for structural reinforcement in armor applications, such as helmet skins, vehicle armor panel reinforcement, and helo seating structures. The system is designed for press applications and can cure within 20 minutes.

FEATURES AND BENEFITS

- Self-extinguishing. Meets FAR 25-853 flammability requirements
- Rapid Cure (<20 min.)

PRODUCT FORMS

- EPM301 is available as a woven fabric prepreg in carbon reinforcement. Resin content and other specifications can be tailored as per customer requirements.
- Standard fabric prepreg widths: 50"

PHYSICAL PROPERTIES

| Fiber Reinforcement Type | 3k 2x2 Twill | 3k PW |
|--------------------------|---------------|-------|
| Fiber Areal Weight (gsm) | 208 | 196 |
| Resin Content (% by wt.) | 32%; 38% | 38% |
| Volatiles (% max) | 1% | 1% |
| Resin Flow (%) | 5-11.5% | 11.5% |
| Tg (DSC) | 246°F (119°C) | |

LAMINATE PROPERTIES

| Fiber Reinforcement Type | Units | 3k 2x2 Twill |
|--------------------------|-----------|--------------|
| Cure Type for Evaluation | | Press |
| Tensile Strength | ksi (MPa) | 113 (779) |
| Tensile Modulus | Msi (GPa) | 13.0 (89) |
| Compression Strength | ksi (MPa) | 62 (427) |
| Compression Modulus | Msi (GPa) | 9.8 (68) |
| Flexural Strength | ksi (MPa) | 105 (724) |
| Flexural Modulus | Msi (GPa) | 9.8 (68) |

Note: Room temperature, dry condition. Values are average and do not constitute a specification.



PROCESS INFORMATION

The following are general recommendations for successful processing. Adjustments may be required to achieve optimum results in your specific manufacturing environment.

Press Cycle (In-hot, Out-hot)

- Recommended 50-70 psi
- Cure at 250°F (121°C) for 20 min.

| Shelf Life | |
|------------------------------|-----------|
| Room Temperature (77°F/25°C) | 4 weeks |
| 0°F (-18°C) | 12 months |

Quality Certifications: ISO 9001:2015 (Millbury and Charlotte facilities); AS9100D (Millbury facility)

Note: EPM301 Prepreg is wound with a polyethylene film liner or paper backing for easy release. The rolls are sealed in polyethylene film bags to protect prepreg from moisture and other contaminants. The bags should remain sealed while the prepreg is under refrigeration and only removed when the prepreg has had sufficient time to warm to room temperature. When not in use, the prepreg should be returned to refrigerated storage. Care should be exercised to limit out-time of the prepreg in order to insure maximum shelf life. Torn bags should be replaced. The data presented herein has been developed under controlled manufacturing. No warranty is expressed or implied regarding the accuracy or use of this data or the use of this product. It is the responsibility of the end user to determine suitability for use.