# FM® 385

Epoxy; Epoxide

Cytec Industries Inc.

## Message:

FM® 385 adhesive film was developed specifically for bonding composite and metallic structures for nacelle applications. It provides a unique combination of high Tg good toughness and very high flatwise tensile properties. FM 385 is designed for co-cure, co-bond or secondary bonding applications and is compatible with most 350°F (177°C) curing epoxy-based prepreg systems. It has excellent resistance to pre-bond and post-bond humidity and has a dry service temperature of 420°F (215°C). FM 385 adhesive film provides excellent handling properties (good tack and drape) and has a minimum shop life of 30 days at 75°F (24°C). FM 385 adhesive can be supplied as a supported (woven glass or mat carrier) or unsupported film at various weights and thicknesses. For co-cure or co-bond applications, adhesive film weight of 0.060 - 0.080 lb/ft 2 with woven glass or a glass mat carrier is recommended. This adhesive film is suitable for bonding of monolithic or sandwich structures. Honeycomb sandwich panels manufactured using FM 385 adhesive film demonstrate excellent laminate quality (void content <1%) and very good filleting. FM 385 adhesive film can be cured at 350°F (177°C) in 90 minutes at 40 psi (0.28 MPa) or can be cured under vacuum-only pressure. Performance after vacuum-only cure is comparable to that after pressure cure. Cytec recommends using 250°F (121°C) curing BR® 6747-1 (chromated) or BR 6700 (non-chromated) water-based primers for metal bond applications using FM 385 adhesive film. For higher temperature applications or continuous service at 350°F (177°C), higher Tg BR 6800 non-chromated primer is recommended.
Suggested Applications:
Co-cure, co-bond and secondary bonding of metallic and composite structures for nacelle applications
Bonding of honeycomb sandwich structures

| General Information | | |
|---|---|---|
| Features | Good Adhesion<br>Good Strength<br>Good Toughness | |
| Uses | Adhesives<br>Aerospace Applications<br>Bonding<br>Structural Parts | |
| Appearance | Dark Grey | |
| Forms | Film | |
| **Physical** | **Nominal Value** | **Unit** |
| Specific Gravity | 1.70 | g/cm³ |
| **Additional Information** | **Nominal Value** | **Unit** |
| Volatiles | < 1.0 | % |
| **Cured Properties** | **Nominal Value** | **Unit** |
| Lap Shear Strength | | |
| 24°C [1] | 37.9 | MPa |
| 24°C [2] | 50.1 | MPa |

| NOTE | |
|---|---|
| 1. | FM385S 0.10 psf, 0.5 in (12.7 mm) Lap Shear with Aluminum Substrates |
| 2. | FM385S 0.10 psf, Double Lap Shear with Aluminum Substrates |

## Recommended distributors for this material

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