

3500FR



250-300°F (120-150°C) Cure High Performance Epoxy Resin Adhesive

Typical applications

Aerospace
Military

Shelf life

3 months at 40°F (4°C)
6 months at 0°F (-18°C)

Out life

14 days at 70°F (21°C)

Description

3500FR is a 250°F (120°C) to 300°F (150°C) cure, high performance, flame retardant, epoxy film adhesive designed for bonding metallic and honeycomb core materials in applications ranging from -67° (-55°C) to 180°F (82°C).

Benefits/features

- Flame retardant
- Meets FAR 25.853 Appendix F, Part I, (a)(1)(i) flammability requirements
- Meets: MMM-A-132B, Type I, Class 2, Group 3
- Meets MIL-A-25463B, Type I, Class 2, Group 3
- High peel and shear strength properties
- Exceptional metal-to-metal and honeycomb bonds
- Co-curable with most 250°F (120°C) cure prepreg
- Controlled flow

Application

3500FR is suited for structural and secondary bonding applications in aerospace and military where both flame retardancy and exceptional bond strength is required.

3500FR is supplied in standard film weights from 0.030 to 0.090 psf (150-450 gsm), and a variety of commercially available carriers, including:

- Non-woven polyester carrier (HC)
- Nylon mesh (N) and tricot (TR)
- Unsupported (U)

Recommended processing conditions

3500FR can be cured at temperatures from 250°F to 300°F (120°C -150°C) depending on part size and complexity. Low, medium and high pressure molding techniques may be used for curing. Recommended cure cycle is 35 psi (241 kPa); 3°F (1.7°C)/min ramp to 275°F (135°C); hold for 60 minutes, cool to <140°F (60°C).

Contact your account manager or MCCFC technical support to discuss specific applications.



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Technical Data Sheet



Neat resin (values are average and do not constitute a specification)

Property	Measured value
Gel time @ 275°F (135°C), minutes	3 – 5
Specific gravity	1.22
T _g (DMA, E'), °F (°C)	239 (115)

Mechanical data (values are average and do not constitute a specification)

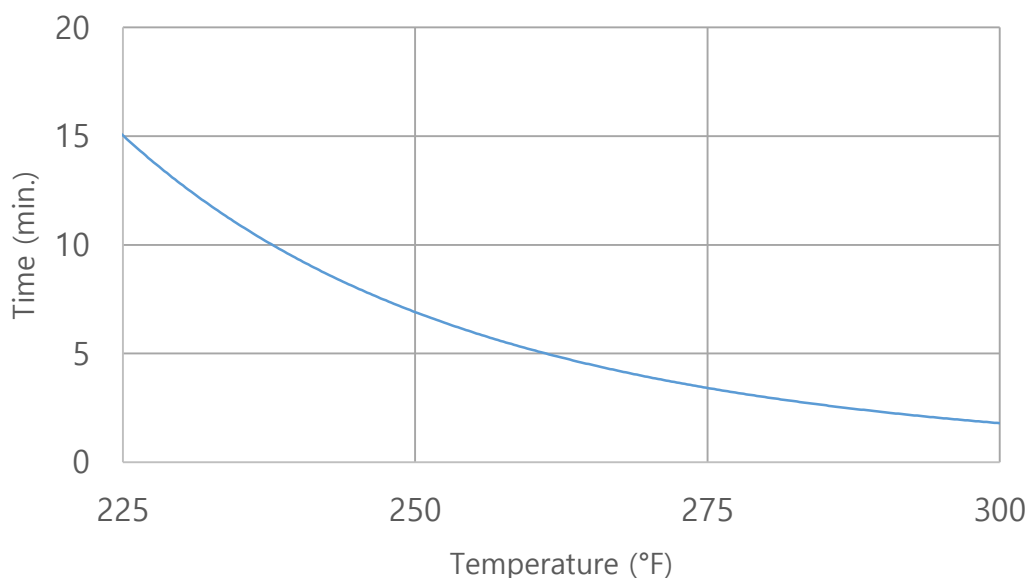
TB3500 HC 0.060

Press cured, 25 psi, 60 minutes at 275°F

Property	Test method	-67°F (-55°C)	RT	180°F (82°C)
Tensile shear strength, psi (Mpa)*	ASTM D1002	3880 (26.7)	5300 (36.5)	3190 (21.9)
T peel strength, lbs/in (N/mm)*	ASTM D1876	22.6 (3.96)	29.9 (5.24)	45.7 (8.11)
Climbing drum peel strength, in-lbs/in (Nm/m)** <i>press cured @ 275°F for 60 minutes, 25 psi, ¼" cell, 8 lb aluminum core</i>	ASTM D1781	16.3 (72.5)	18.3 (81.4)	19.0 (84.5)

*MMM-A-132B, Type I, Class 2 **MIL-A-25463B, Type I, Class 1

Gel time vs temperature



The information contained herein has been obtained under controlled laboratory conditions and are typical or average values and do not constitute a specification, guarantee, or warranty. Results may vary under different processing conditions or in combination with other materials. The data is believed to be reliable but all suggestions or recommendations for use are made without guarantee. You should thoroughly and independently evaluate materials for your planned application and determine suitability under your own processing conditions before commercialization. Furthermore, no suggestions for use or material supplied shall be considered a recommendation or inducement to violate any law or infringe any patent.

CORPORATE OFFICE
Composite Materials Division
1822 Reynolds Avenue
Irvine, CA 92614

Tel: (949) 253-5680
Fax: (949) 253-5692
www.mccfc.com
compositesales@mccfc.com

THE KAITEKI COMPANY

Mitsubishi Chemical Holdings Group