

102



250-300°F (120-150°C) Cure Epoxy Film Adhesive

Typical applications

Aerospace
Sporting goods
Marine
Wind energy
Industrial

Out life

30 days at 70°F (21°C)

Shelf life

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

Description

102 is a 250°F (120°C) to 300°F (150°C) cure, long out time, general purpose epoxy film adhesive designed for bonding applications requiring high strengths from -67°F (-55°C) to 180°F (82°C).

Benefits/features

- High toughness
- High strength sandwich panel bonds
- Co-curable with most 250°F (120°C) curing prepregs

Application

102 is suited for structural and secondary bonding applications in aerospace, sporting goods, marine, wind energy, and industrial manufacturing. High shear and peel strengths make 102 ideal for metal-to-metal bonding and sandwich panel manufacturing.

102 is supplied in standard film weights from 0.030 - 0.090psf (150 - 450gsm), either unsupported or on a variety of commercially available reinforcements, including:

Non-woven polyester mat (HC)
Nylon mesh (N), and tricot (TR)
Unsupported (U)
Metal meshes for electrical management

Recommended processing conditions

102 can be cured at temperatures from 250°F (120°C) to 300°F (150°C), depending on part size and complexity. Low, medium, and high pressure molding techniques may be used to cure 102. Recommended cure cycle is 25 psi (172kPa), 3°F (1.7°C)/min ramp to 285°F (141°C), hold for 45 minutes, cool to <140°F (60°C).

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



MITSUBISHI CHEMICAL
CARBON FIBER AND COMPOSITES

Technical Data Sheet



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

Property	Measured Value
Gel time @ 275°F (135°C), minutes	4 – 7
Specific gravity	1.20
T _g (DMA, E'), °F (°C)	230 (110)

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

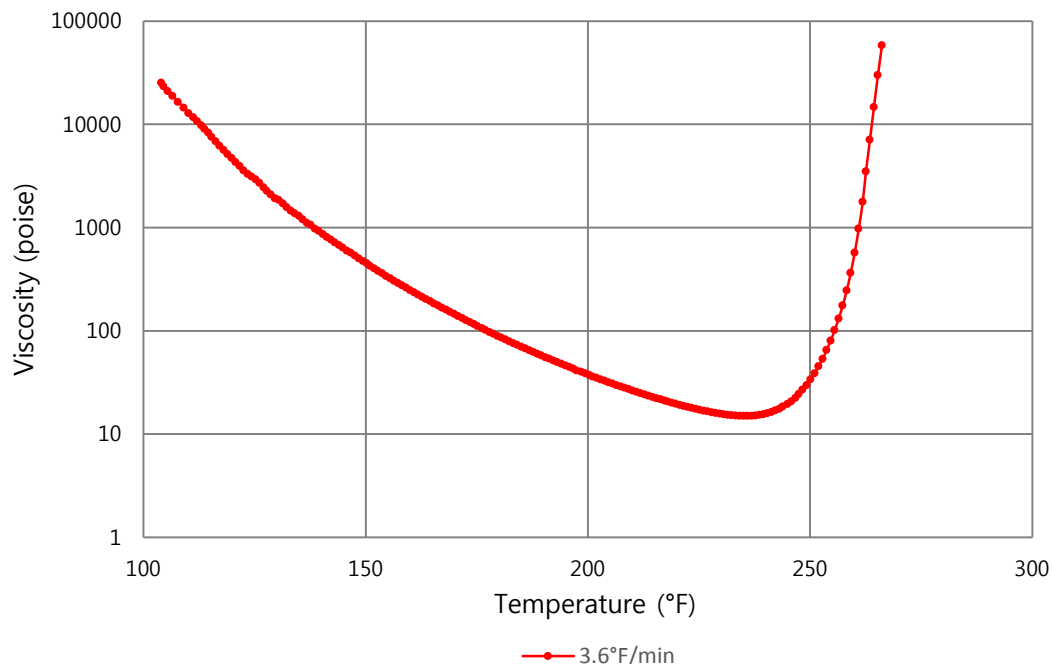
Metal to metal tests MMM-A-132, Sandwich tests MIL-A-25463 NB102HC @ 0.060 psf, press cured, 25 psi, 45 min at 285°F

Property	Test method	-67°F	RT	180°F	220°F
Tensile shear strength, psi (MPa)	ASTM D1002	4100 (28)	4500 (31)	3000 (21)	2300 (16)
Climbing drum peel strength, in-lbs/in (m-N.m)	ASTM D1781	11 (49)	16 (71)	12 (53)	--
Flatwise tensile strength, psi (Mpa)	ASTM C297	1000 (6.9)	1100 (7.6)	800 (5.5)	--
Flexural strength, lbs (kN)	ASTM C393	2800 (12)	2900 (13)	2400 (11)	--

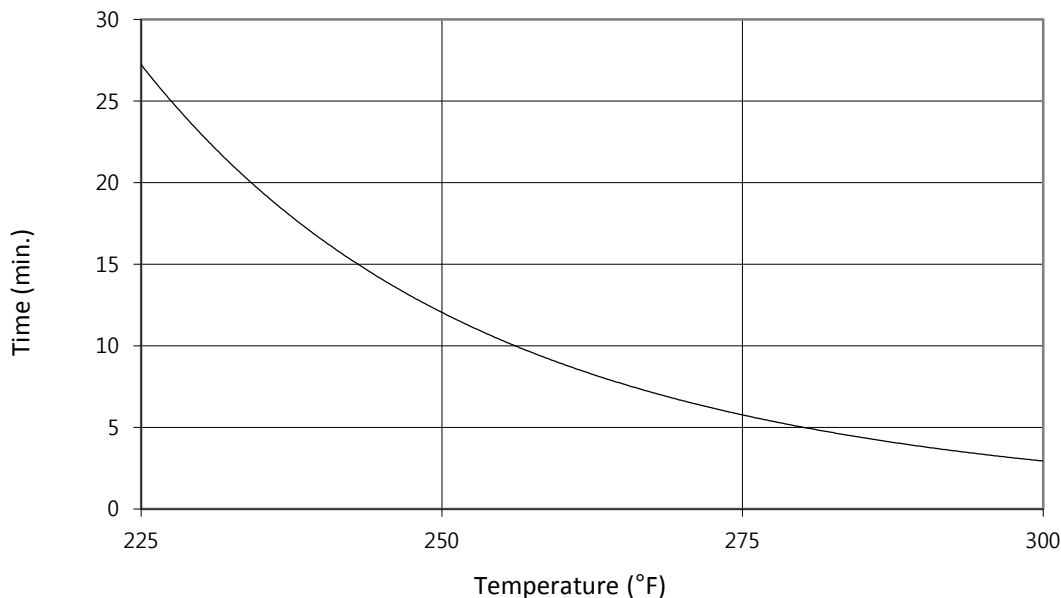


102 Viscosity vs. temperature

TA - AR2000 parallel plate rheometer



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.

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