NEWPORT
ADHESIVES AND COMPOSITES, INC.
A subsidiary of MITSUBISHI RAYON CO., LTD.

Newport 1102 Product Data Sheet

Newport 1102

Description:

Newport 1102 is a 250°F to 300°F cure, general purpose toughened, controlled flow epoxy resin system. Versatile processing, excellent mechanical properties, and long out-life make Newport 1102 suitable for a variety of applications.

Application:

Newport 1102 is well suited for structural applications and secondary bonding in aerospace, sporting goods, radomes, marine, wind energy, and industrial manufacturing where good adhesion strength and toughness is required.

Newport 1102 can be supplied with most commercially available fibers in woven form (designated as NB) including:

Carbon
Quartz
S-glass
E-glass
Other specialty fibers and fabrics

.

Benefits/Features:

- Good tack and processability
- Controlled resin flow
- Toughened
- Excellent for sandwich structures and laminates
- Flexible processing: curable by autoclave, press, or vacuum bag
- 30 days out-life at 70°F

Recommended Processing Conditions:

Newport 1102 can be cured at temperatures from 250°F to 300°F, depending on service temperature requirements. Low, medium, and high pressure molding techniques may be used for curing. Recommended cure cycle is 25 psi, 3°F/min. ramp to 275°F, hold for 60 minutes, cool to <140°F.

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Physical Properties*:

Gel Time (275°F):	5 - 7 minutes
Specific Gravity:	1.22 ± 0.02
Tg (DMA, E'):	220°F
CTE = ppm/°C	60 ± 10 (below Tg)

Mechanical Properties:

7781 E-Glass reinforcement*:

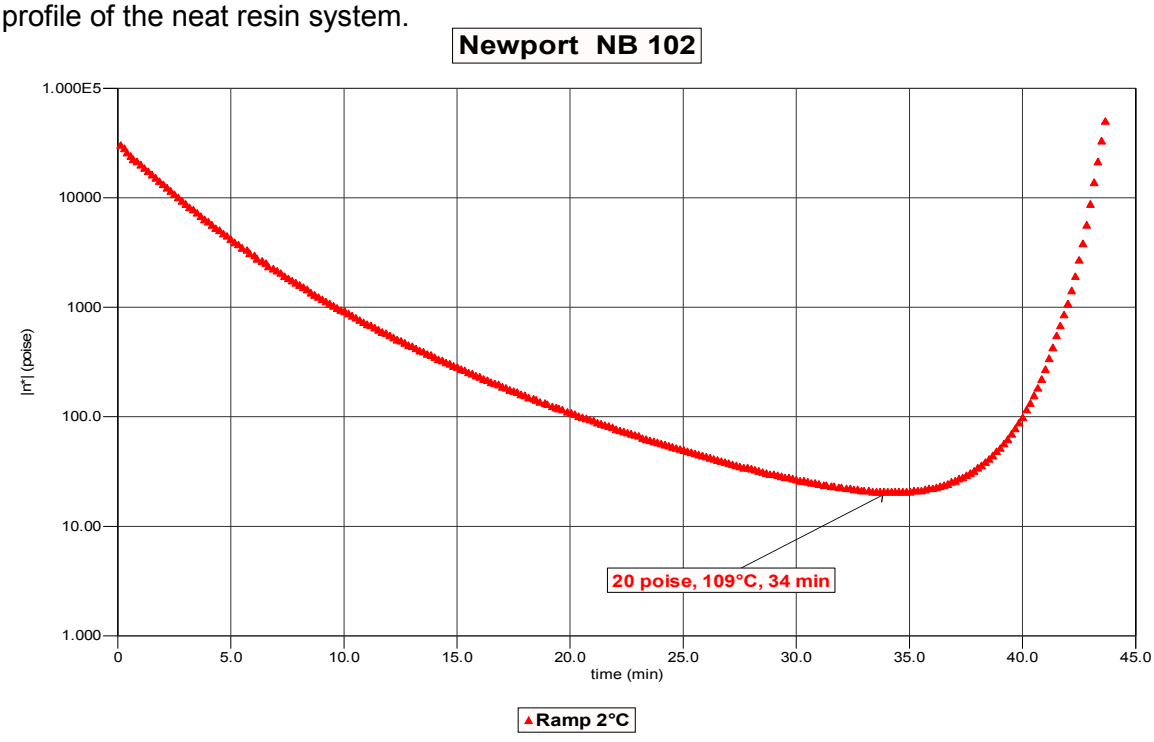
The mechanical properties listed in the following table are average values obtained from NB1102 with 7781 E-glass fabric (40% RC), autoclave cured at 275°F for 60 minutes with 25 psi pressure. Sandwich properties were obtained per MIL-A-25463.

Property	Test Method	- 67°F*	RT*	160°F*
0° Tensile strength, ksi	ASTM D-3039	-	55	43
0° Tensile modulus, Msi		-	3.0	-
0° Flexural strength, ksi	ASTM D-790	-	60	54
0° Flexural modulus, Msi		-	3.2	-
Sandwich Peel (in-lbs/3 in)	ASTM D-1781	20	32	24

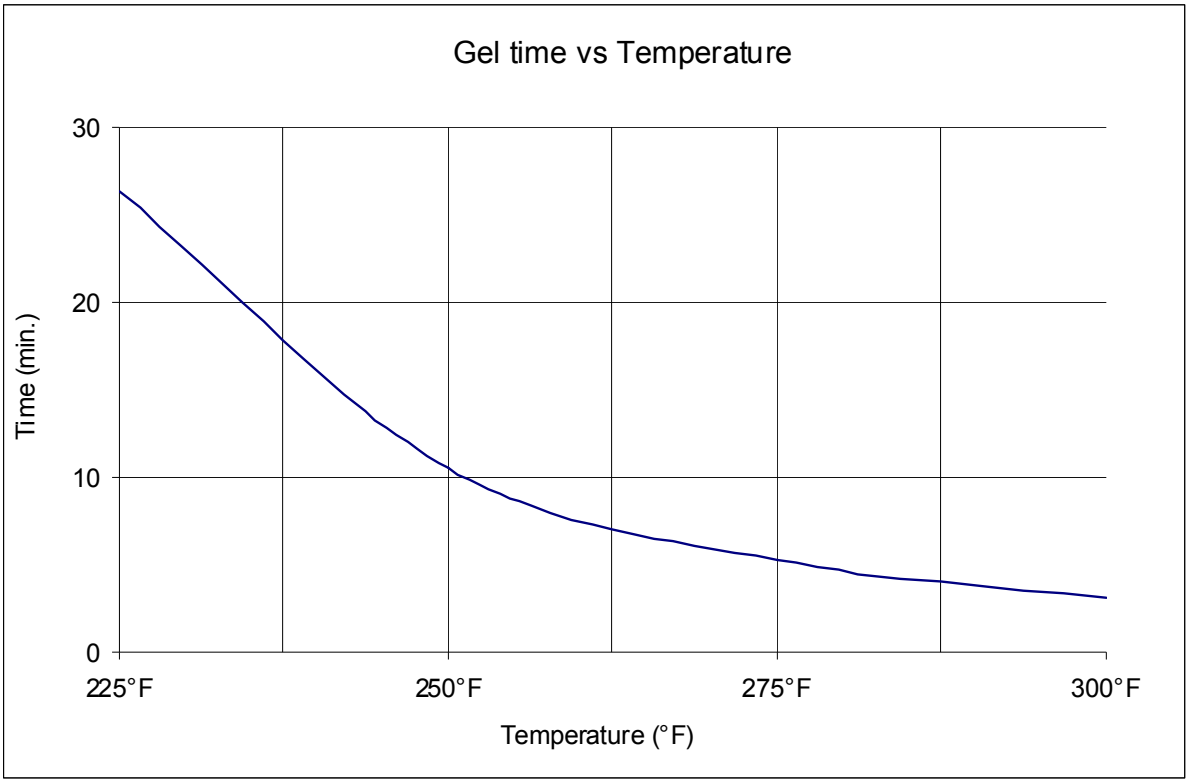
** Values are average and do not constitute an specification*

Melt Viscosity Profile of Newport 1102

A TA (model AR2000) parallel plate rheometer was used to determine the melt viscosity profile of the neat resin system.



Gel Curve Profile of NB1102



Prepreg Storage:

Material can be stored at 40°F for 3 months, or 0°F for 6 months. Out time is 30 days maximum at room temperature (70°F).

Availability:

Newport 1102 is available in a wide variety of most commercially woven fabrics including: aramid, E-glass, S-glass and graphite fibers. Contact Newport about any specialty fibers.

Standard prepreg fabric widths:

E-glass 38, 50 inch
Carbon 42, 50 inch
Kevlar® 38, 50 inch

For orders, pricing, availability, technical assistance or other inquiries please contact:

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