



Weply 60F Flame Retardant Prepreg System

Introduction

Weply 60F prepreg is a flame retardant resin system with high service temperature designed for heat and flame shielding. Under the action of extreme heat, Weply 60F can turn into a ceramic-like material. It can be supplied on a variety of fabrics to meet your cost and manufacturing requirements. This resin system colour is dark brown / black.

Key Features & Benefits

Weply 60F offers the following benefits:

- Cure temperature from 120°C
- Service temperature up to 330°C after post cure*
- Work life at 20°C: 21 days
- Storage life at -18°C: 12 months.
- Rated UL94 V0

*Capable of exposure to higher temperatures – consult WELA for details

Storage & Out Life

The material should be kept frozen at -18°C. It must be kept in sealed in a polyethylene plastic bags which must not be opened until fully thawed to room temperature. If the material is not fully used, then the material must be resealed in the polyethylene bag to prevent moisture absorption.

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Cure Cycles & Service Temperatures

Cure		Post Cure		Service Temperature	Tg – E' Onset	Tg – tan δ Peak
120°C	90 min	-	-	120°C	125°C	170°C
130°C	1 hour	-	-	150°C	160°C	200°C
130°C	1 hour	200°C	2 hours	250°C	270°C	325°C
130°C	1 hour	300°C	2 hours	330°C	350°C	390°C

Recommended cures:

Autoclave / oven cure

- 130°C for 1h, at a ramp rate 2-3°C/min
- P3 Release film recommended

Press cure

- 130°C for 1h, at a ramp rate 2-3°C/min
- Cool down below 90°C before opening the press

The cures given are as a guide only, and will be subject to changes in part geometry and construction.

Notes:

- Due to the chemical nature of this material, water is evolved during the cure. If press curing the press may need to be vented during the cure for best results. If curing under vacuum, it is recommended that a water trap is placed in the vacuum line to prevent damage to vacuum pump oil.
- For autoclave cure, the maximum pressure that can be applied will vary depending on the curing temperature. Consult our technical team for more information.

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Flame propagation

UL94 vertical burn rating: V0

Material tested: 8 x Weply 60F/33%/300H (7781)

Cured 1h by 130°C

UL94 conditions and ratings

Conditions	V-0	V-1	V-2
Afterflame time for each individual specimen A or B	≤10s	≤30s	≤30s
Total afterflame time for any condition set (A+B) for 5 specimens	≤50s	≤250s	≤250s
Afterflame plus afterglow time for each individual specimen after second flame application (B+C)	≤30s	≤60s	≤60s
Afterflame or afterglow of any specimen up to the holding clamp	NO	NO	NO
Cotton indicator ignited by flaming particles or drops	NO	NO	YES

23°C conditioned

Specimen No.	Weply 60F 2mm laminate material				
	A	B	C	D	E
1	2.0	8.2	Nil	No	No
2	2.0	5.1	Nil	No	No
3	2.5	8.1	Nil	No	No
4	2.0	6.2	Nil	No	No
5	2.0	8.8	Nil	No	No

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WELA

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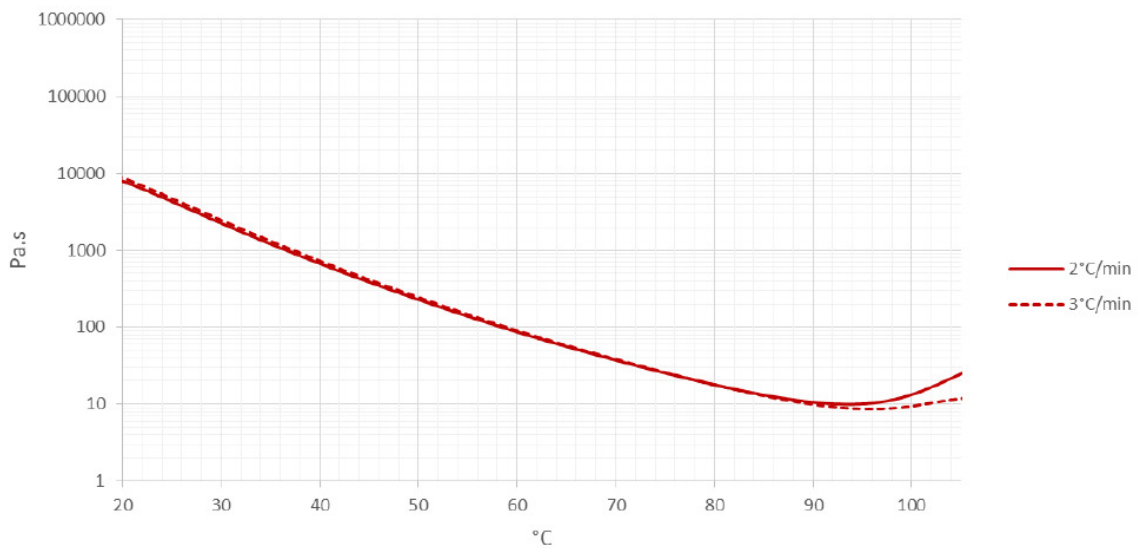
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70°C conditioned

	Weply 60F 2mm laminate material				
Specimen No.	A	B	C	D	E
1	2.0	4.1	Nil	No	No
2	2.6	3.0	Nil	No	No
3	2.9	8.0	Nil	No	No
4	2.7	5.0	Nil	No	No
5	2.1	5.2	Nil	No	No

Viscosity Profile

Testing carried out at 23°C +/-2, 50 +/-5% RH.



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Health and Safety

Please refer to the product Safety Data Sheet before using this material.
The following precautions must be taken when using PFA resin prepregs:

- Overalls must be worn at all times when using Weply 60F
- Impervious gloves must be worn
- Curing schedule is meant to be as a guide only and is subject to local conditions.
- To avoid exotherm, particular care must be taken with thick laminates.
- Ramp rates must not exceed 3°C per minute during initial cure
- Ramp rates must not exceed 1°C per minute during post cure

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