

Source clarification required: the LTP220 sheet refers to LTP240 in its description and gives a glass transition temperature of 220°C in the description but 240-250°C in its table. These original names and values are retained; confirm the intended product and cure condition with EPTEK.

LTP 220

Low Temperature Pre-curing Tooling Prepreg

DESCRIPTION :

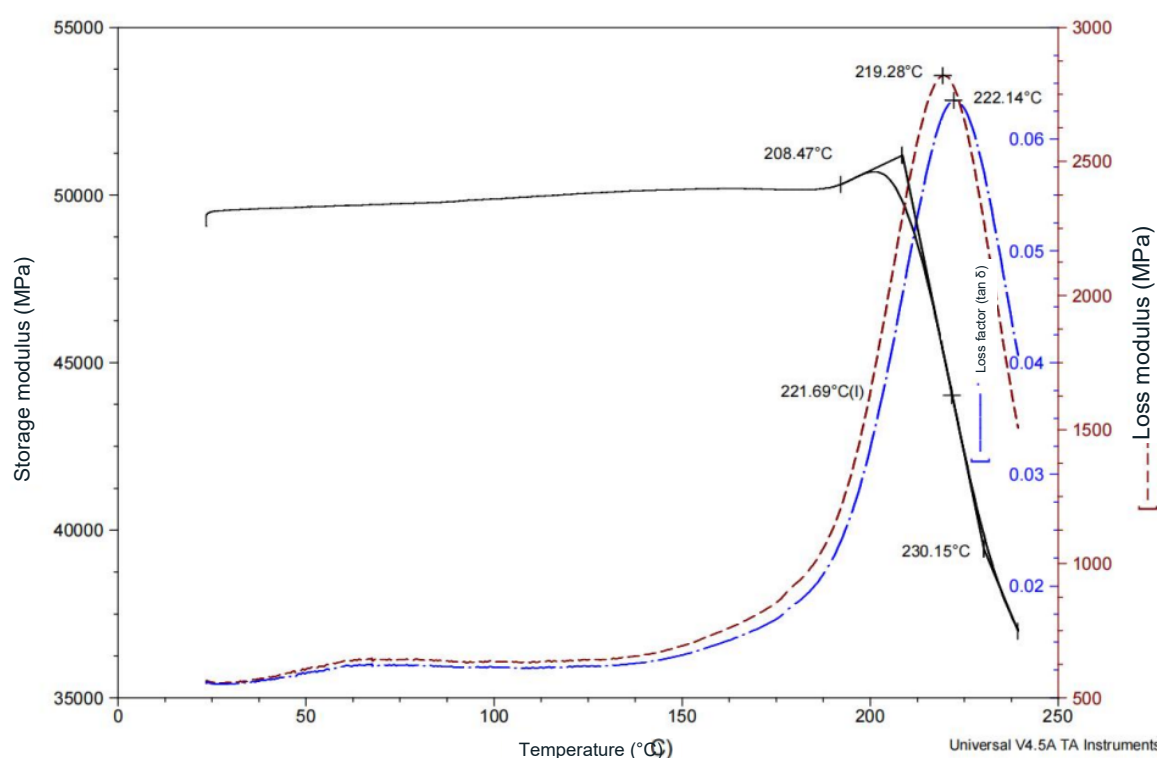
LTP 220 is an epoxy resin system that can be pre-impregnated into high performance fibers such as carbon and glass. This resin has excellent mechanical properties and high transparency after complete curing, making it particularly suitable for the production of prepreg mold. LTP 240 has 7 days shelf life at 22 °C , and is able to get initial cure at 55 °C , which could reduce the deformation of plug. After fulling post-curing, Tg could reach up to 220 °C(DMA).

CHARACTERISTIC :

- 7 days Shelf life at RT 22 °C • Laminating on low Tg plug
- 12 months shelf life at -18 °C • No need support during post-curing • Good surface quality after curing in • Service temperature up to 190 °C autoclave

RESIN PROPERTY :

Tg of LTP220 Resin



Storage modulus (MPa)

Temperature (°C)

Loss modulus (MPa)

Loss factor (tan δ)

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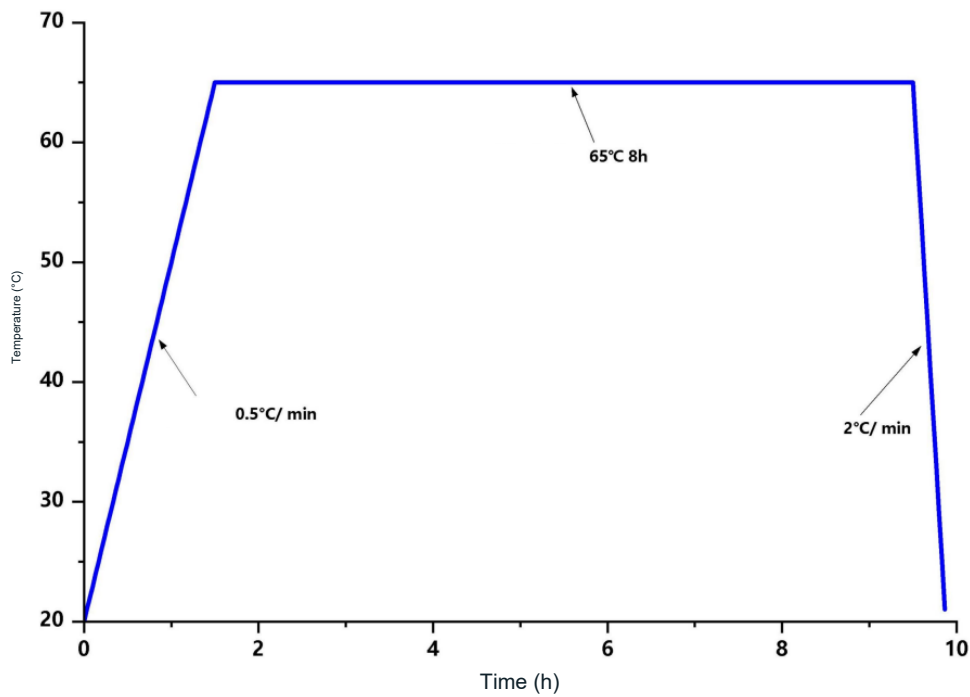
REINFORCE MATERIAL :

Type of Fiber	Weight(gsm)	Weave style	Resin content
High strength Carbon 3K	200	2/2 Twill	50 (surface ply)
High strength Carbon 12K	480	2/2 Twill	40
High strength Carbon 12K	650	2/2 Twill	40
Carbon-glass composite fiber	50+150	2/2 Twill	38
Carbon-glass composite fiber	150+450	2/2 Twill	38
Fiberglass fabric	Customized	2/2 Twill	35

CURING SCHEDULE:

Pre-curing	0.5°C/min to 65°C	0.5-0.7 MPa Pressure	Dwell for 8 hours
The pre-curing temperature must not exceed 80°C to avoid high exothermic temperature.			
Post-curing	1°C/min to 65°C		Dwell for 2 hours
	1°C/min to 90°C		Dwell for 2 hours
	1°C/min to 120°C		Dwell for 2 hours
	1°C/min to 150°C		Dwell for 2 hours
	1°C/min to 170°C		Dwell for 2 hours
	1°C/min to 190°C		Dwell for 6 hours
Cooling	Cooling to 50°C at 2.5°C/min		
Glass Transition Temperature	240-250°C (DMA)		

Pre-cure cycle



Temperature (°C)

Time (h)

Pre-cure cycle

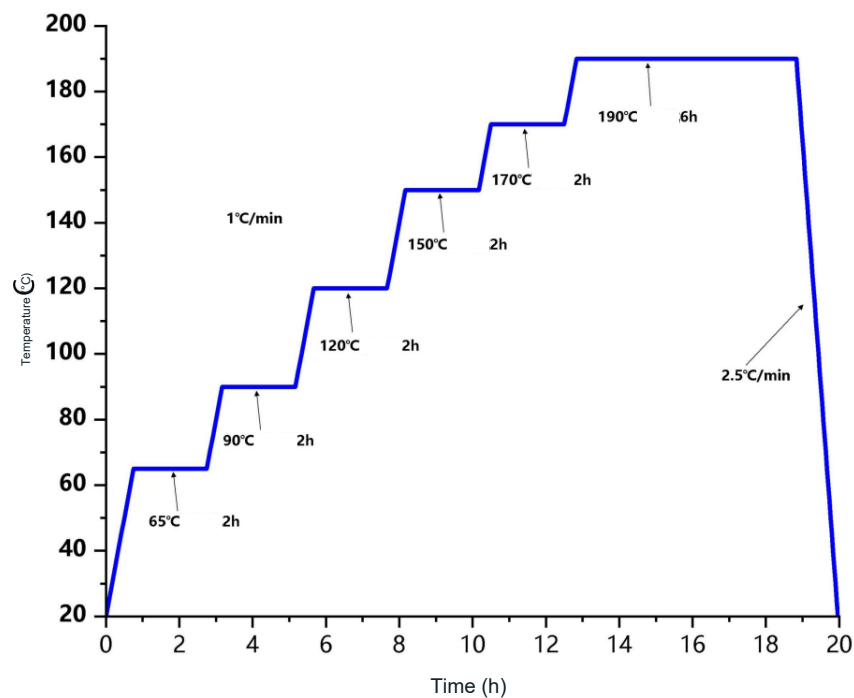
Hold at 65°C for 8 h

Heating rate: 0.5°C/min

Cooling rate: 2°C/min

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Post-cure cycle



Temperature (°C)

Time (h)

Post-cure cycle

Heating rate: 1°C/min

Cooling rate: 2.5°C/min

65°C for 2 h

90°C for 2 h

120°C for 2 h

150°C for 2 h

170°C for 2 h

190°C for 6 h

STOTAGE CONDITION :

Shelf life of LTP 220 is 10 days at ambient temperature 7 °C, refrigerated storage at -18 °C is one year. To avoid moisture condensation, following removal from cold storage, allow prepreg to reach room temperature before opening the polyethylene bag .

HANDLING PRECAUTIONS

It should be processed at well-ventilated room; avoid to contact with skin during handling process; wear gloves, mask, safety glass and protective clothing. For further information, please consult material safety data sheet.

NOTE:

The data above is tested at specific conditions. Processing procedure and conditions might vary in practical applications, therefore it is recommended to carry out tests where necessary before using the product, and to ensure the product could meet the actual requirement. We at EPTEK guarantee that our products meet our highest quality management regulations.

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US customary-unit equivalents

US customary-unit equivalents are provided for convenience alongside the original SI test data. The original source values and test methods remain the controlling reference. Converted values are rounded.

Source value	US equivalent
22 °C	71.6 °F
55 °C	131 °F
220 °C	428 °F
-18 °C	-0.4 °F
190 °C	374 °F
0.5 °C/min	0.9 °F/min
1 °C/min	1.8 °F/min
5 °C/min	9 °F/min
240-250 °C	464 to 482 °F
65 °C	149 °F
0.5 °C/min	0.9 °F/min
2 °C/min	3.6 °F/min
1 °C/min	1.8 °F/min
2.5 °C/min	4.5 °F/min
90 °C	194 °F
120 °C	248 °F
150 °C	302 °F
170 °C	338 °F
190 °C	374 °F
7 °C	44.6 °F