

Data Sheet

LTC3 CARBON PREPREGS

Epoxy/carbon low temperature cure tooling prepregs

DESCRIPTION

LTC3 prepregs offer a low temperature cure and high temperature use after post cure. LTC prepregs allow the use of lower cost master model materials.

LTC3-G1400 is a light weight tooling prepreg with a low temperature for the manufacture of composite tooling laminates capable of high temperature use.

LTC3-G1600 is a heavy weight tooling prepreg with a low temperature cure for the manufacture of composite tooling laminates capable of high temperature use.

LTC3-G1800 is a heavier weight tooling prepreg used to produce moulds with a low temperature cure. The heavy weight material is used to build laminate bulk faster thus reducing the number of plies required. Saving up to 30% labour time on standard laminates, plus cost savings.

BENEFITS

- Low initial cure temperature reduces thermal expansion of master model, improving mould accuracy.
- Lower cost, low temperature master model materials can be used.
- Good surface finish and low void content laminate for longer life moulds and good part quality.

TECHNICAL DATA

Physicals	LTC3-G1400	LTC3-G1600	LTC3-G1800
Description	Light Weight	Heavy Weight	Heavy Weight
Fibre / Yarn Type	Carbon / 3K	Carbon / 12K	Carbon / 24K
Weave Style	2 x 2 twill	2 x 2 twill	2 x 2 twill
Fibre Areal Weight	193 g/m ²	644 g/m ²	955 g/m ²
Resin Content	40+/- 3 %	37 +/- 3 %	37 +/- 3 %
Nominal Cured Ply Thickness	0,30 mm	0,66 mm	0,95 mm
Service Temperature	200°C	200°C	200°C
Glass Transition Temperature	206°C after post cure	206°C after post cure	206°C after post cure

SHELF LIFE

12 months at -18°C, 4-5 days at 20°C from date of shipment when stored in original packaging.

SIZES

Product Reference	Width	Length	Minimum Order Quantity
LTC3-G1400	125 cm (49 inches)	20 m (65,6 feet)	1 roll
LTC3-G1600	125 cm (49 inches)	27 m (88,6 feet)	1 roll
LTC3-G1800	125 cm (49 inches)	16 m (52,5 feet)	1 roll

- Roll lengths may vary +/- 5 % depending on stock availability.

Last updated : 2018-10-09

Catalogue position : **Toolmaster® Tooling materials**

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■ CURE INSTRUCTIONS

Cure	Autoclave Vacuum / Pressure / Temperature	Dwell
1	Apply full vacuum at 28 inHg. Pressurise autoclave to 7 bar.	-
2	Heat to 55°C at 1°C / minute.	Hold for 16 hrs
3	Cool to room temperature before removing vacuum and demoulding from master model.	-

Alternative Cure Cycles at 7 Bar	Autoclave Vacuum / Pressure / Temperature	Dwell
Option 1	Heat at 1°C / minute to 41°C, cool to room temperature after dwell.	Hold for 60 hrs
Option 2	Heat at 1°C / minute to 45°C, cool to room temperature after dwell.	Hold for 40 hrs
Option 3	Heat at 1°C / minute to 50°C, cool to room temperature after dwell.	Hold for 30 hrs
Option 4	Heat at 1°C / minute to 60°C, cool to room temperature after dwell.	Hold for 8 hrs
Option 5	Heat at 1°C / minute to 70°C, cool to room temperature after dwell.	Hold for 4 hrs

Post Cure	Oven Temperature / Autoclave Temperature	Dwell
1	Heat at 20°C / hour to 200°C, cool to room temperature after dwell.	Hold for 8 hrs

■ NOTES

- Temperature measurements should be obtained from thermocouples, properly placed for accurate temperature readings. Program controller should follow lagging thermocouple for cure and post cure.
- Do not apply solvent to the mould surface prior to post cure.
- Contact Airtech for our Guide to Toolmaster® Tooling for complete information.
- To avoid condensation, allow prepreg from freezer to warm to room temperature before using.

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