



AMLITE LT64A

LOW TEMPERATURE CURING SYNTACTIC CORE

LT64A is a low temperature curing unsupported epoxy resin film incorporating low density microspheres and is supplied in 625mm x 400mm sheets (0.25m²).

APPLICATION

As a core material in sandwich structures, AMLITE LT64A offers many solutions and advantages for the composite designer. Considerable cost reductions can be realized when replacing prepreg as the core material, and where sandwich cores below 3mm are difficult to achieve in Aluminum or Nomex honeycombs, Amlite is a superior alternative.

AMLITE LT64A is available in a variety of thicknesses down to 1mm, is easily contoured and shaped. AMLITE LT64A offers reduced processing, a one shot cure, the ability to anchor inserts or fastenings and increase the opportunity to consider light weight, thin walled composite sandwich structures.

* AMLITE LT64A is compatible for co-cure with Amber Composites Low temperature cure prepreg E644 and E650.

PROPERTIES

TYPICAL UNCURED

Thickness:	1mm and 2mm \pm 10% as standard, other thicknesses available on request.
Colour:	Charcoal Grey.
Tack:	Medium.
Flexibility:	Pliable at room temperature.
Surface weight:	600 g/m ² nom. for 1mm thickness. 1200 g/m ² nom. for 2mm thickness.
Volatiles:	1% by wt.max.
Gel Time:	60 minutes @ 70°C
Curing temperature	50°C - 80°C

TYPICAL CURED

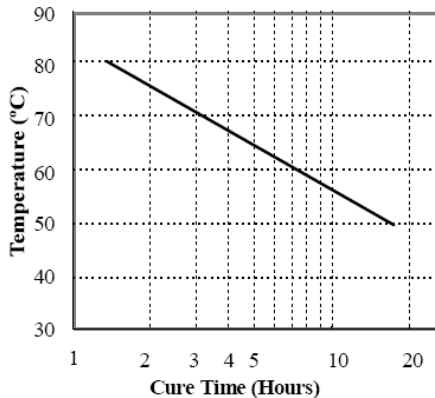
Density:	0.60g/cm ³ \pm 10% depending upon curing conditions.
Tg:	130°C by DSC. (Post cured to 140°C)



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CURING CYCLES



Increase air temperature at 0.5°C/min to the required curing temperature and cure for the stated minimum time.

Initial Cures

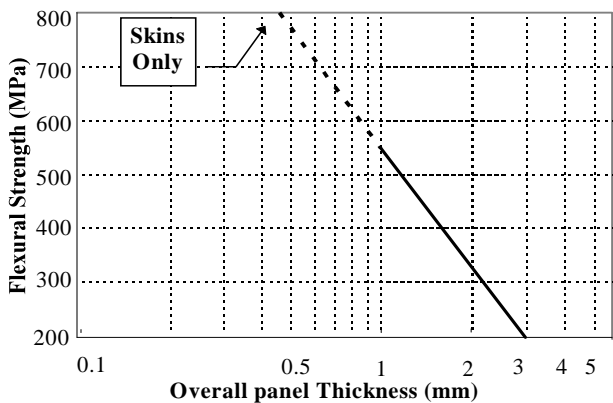
- 50 °C 18 hours minimum
- 60 °C 8 hours minimum
- 70 °C 3.5 hours minimum
- 80 °C 75 minutes minimum

- 1) To achieve the maximum T_g it is essential that a suitable postcure is carried out.
E.g. For T_g 130°C, ramp from initial cure temperature to 140 °C @ 0.3 °C/min and hold for 4 hours minimum.
Cool to 50°C @ 2.5°C/minute

MATRIX PROPERTIES

Flexural Strength: 28 MPa (CRAG 200) N.B These properties were achieved
 Flexural Modulus: 2.3 GPa (CRAG 200) with a 3.5 hour/70°C cure of a 2mm
 Density: 0.60 g/m³ (nominal) thick sample of LT64A

TYPICAL SANDWICH PROPERTIES



Construction

Skins 200gsm Carbon 2/2/E644
 Core LT64A 1 - 3mm
 Cure Vac-Bag/1 bar
 Ramp 0.5°C/min
 3.5 hours @ 70°C

Test

3 point bend flexural
 Span : 50mm
 Sample : 60 x 10 x t(mm)



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STORAGE

Up to 12 months at -18°C (0°F) when stored in sealed polythene bags.

WORKING LIFE

Up to 7 days at room temperature.

APPLICATION

Remove from cold storage and allow to reach room temperature before removing from polythene bag. Trim to required shape and remove release paper from one side. Place in position and remove remaining release paper.

CAUTION

LT64A syntactic core contains a reactive resin system and care must be taken to avoid exothermic heating during the initial cure.

HANDLING SAFETY

This product may cause skin irritation. Avoid skin contact. If contact occurs, wash with soap and water at first opportunity. For further information refer to the Material Safety Data Sheet.

This is not a specification. The information given in this data sheet in relation to the performance, storage and other characteristics of the product is based on results gained from experience and tests and is believed to be accurate. Given, however, that conditions of use and storage will vary, Amber Composites will not be liable for any loss or damage resulting from reliance upon such information. The purchaser is recommended to carry out his own tests to establish the suitability of the product for its particular purpose. The use of the product in certain processes may require third party consent.