

TenCate Amlite LT64A & LT64B Low temperature curing syntactic core

PRODUCT TYPE

50°C (122°F) to 80°C (176°F)

Low temperature curing syntactic core

TYPICAL APPLICATIONS

- Core material in sandwich structures

SHELF LIFE

Out life

7 days at @ 20°C (68°F)

Storage life

12 months @ -18°C (0°F)

Out life is the maximum time allowed at room temperature before cure.

PRODUCT DESCRIPTION

TenCate Amlite LT64 is a low temperature curing epoxy resin film incorporating low density microspheres and is supplied in 625mm x 400mm sheets (0.25m²). As a core material in sandwich structures, TenCate Amlite LT64 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, TenCate Amlite is a superior alternative. TenCate Amlite LT64 is available in a variety of thicknesses and is easily contoured and shaped. TenCate Amlite LT64 is compatible for co-cure with TenCate E644 and E650 low temperature cure prepregs. TenCate Amlite LT64 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 structures.

TENCATE AMLITE LT64 BENEFITS/FEATURES

- Low cost
- Easily contoured and shaped
- Available in a variety of thicknesses
- Reduced processing
- Allows for the opportunity to achieve lightweight, thin walled composite sandwich structures
- One-shot cure
- Ability to anchor inserts or fastenings

TYPICAL UNCURED PROPERTIES

Thickness.....	1.0mm to 2.5mm ± 10% as standard
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 2 mm thickness
Volatiles.....	1% by wt. max
Gel time.....	60 minutes @ 70°C (158°F)
Curing Temperature.....	50°C (122°F) to 80°C (176°F)

TYPICAL CURED PROPERTIES

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

PRODUCT DATASHEET



TENCATE ADVANCED COMPOSITES

TenCate Amlite LT64A & LT64B Low temperature curing syntactic core

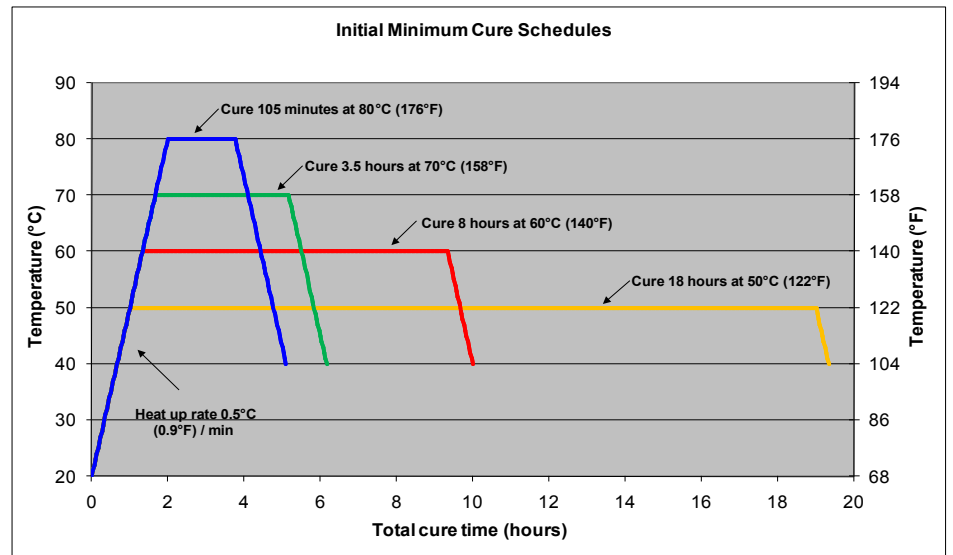
MATRIX PROPERTIES

These properties were achieved with a 3.5 hour /70°C cure of a 2mm thick sample of LT64A

Property	Condition	Method	Results	
Flexural strength	RTD	CRAG 200	28 MPa	4.1 ksi
Flexural modulus	RTD	CRAG 200	2.3 GPa	0.3 Msi

CURING CYCLES

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



RECOMMENDED CURE TIMES

Cure temperature °C (°F)	Recommended cure time
50 (122)	18 hrs
60 (140)	8 hrs
70 (158)	3.5 hrs
80 (176)	75 min

- To achieve the maximum Tg it is essential that a suitable postcure is carried out.
E.g. For Tg 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.

PRODUCT DATASHEET



TENCATE ADVANCED COMPOSITES

TenCate Amlite LT64A & LT64B Low temperature curing syntactic core

STANDARD PRODUCT LISTING

Product Name	Thickness
LT64A	1.0mm
LT64A	1.5mm
LT64B	2.0mm*
LT64B	2.5mm*

*includes backing scrim

Other thicknesses may be available on request.

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: TenCate Amlite LT64 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.

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All data given is based on representative samples of the materials in question. Since the method and circumstances under which these materials are processed and tested are key to their performance, and TenCate Advanced Composites has no assurance of how its customers will use the material, the corporation cannot guarantee these properties.

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