

PRODUCT DATASHEET



TENCATE ADVANCED COMPOSITES

TenCate Amlite SC72A

Syntactic epoxy resin core

PRODUCT TYPE

120°C (248°F) cure
Syntactic epoxy resin core

TYPICAL APPLICATIONS

- Core material in sandwich structures

SHELF LIFE

Out life

1 month at @ 20°C (68°F)

Storage life

12 months @ -18°C (0°F) when stored in sealed polythene bags

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

PRODUCT DESCRIPTION

TenCate Amlite SC72A is a 120°C (248°F) curing unsupported epoxy resin film incorporating low density microspheres, and is supplied on a roll (15m x 400mm) or in sheets (625mm x 400mm). As a core material in sandwich structures, TenCate Amlite SC72A offers many solutions and advantages for the composite designer. Considerable cost reductions can be realised when replacing prepreg as the core material, and where sandwich cores below 3mm are difficult to achieve in Aluminium or Nomex honeycombs, Amlite is a superior alternative. TenCate Amlite SC72A is available in a variety of thicknesses down to 1mm, is easily contoured and shaped. TenCate Amlite SC72A is compatible for co-cure with TenCate E720 and E722 mid temperature cure prepreg. TenCate Amlite SC72A 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.

TENCATE AMLITE SC72A 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
- Long outlife at ambient temperature

TYPICAL UNCURED PROPERTIES

| | |
|-------------------------|--|
| Thickness..... | 1mm and 2mm ± 10% as standard, other thicknesses available on request |
| Colour..... | Charcoal grey |
| Tack..... | Medium |
| Flexibility..... | Pliable at room temperature |
| Surface weight..... | 570 g/m ² nom. for 1mm thickness 1140 g/m ² nom. for 2 mm thickness |
| Volatiles..... | 1% by wt. max |
| Gel time..... | 12 minutes |
| Curing temperature..... | 120°C (248°F) |

TYPICAL CURED PROPERTIES

| | |
|------------------------------------|---|
| Density..... | 0.57 g/cm ³ ± 10% depending upon curing conditions |
| Tg after 1hr at 120°C (248°F)..... | Onset: 106°C (222°F); Peak Tan δ: 116°C (240°F) |

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TenCate Amlite SC72A

Syntactic epoxy
resin core

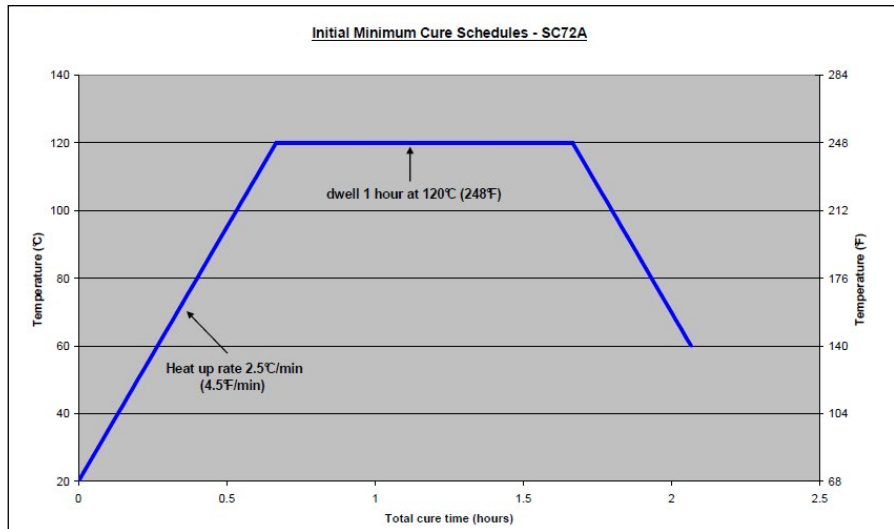
MATRIX PROPERTIES

These properties were achieved with a 1 hour @ 120°C (248°F) cure of a 2mm thick, 0.57 g/cm³ density sample of TenCate Amlite SC72A.

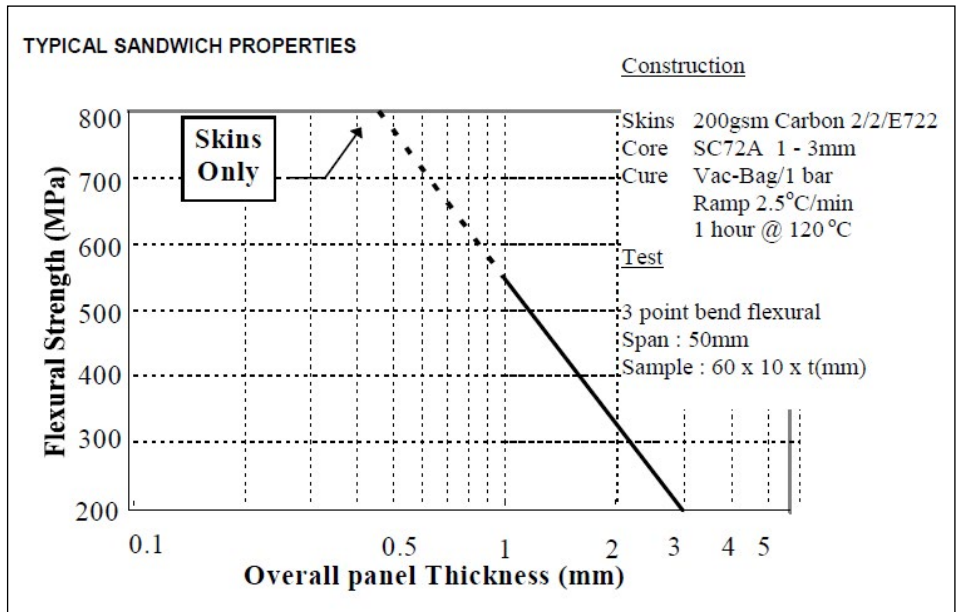
| Property | Condition | Method | Results | |
|-------------------|-----------|----------|---------|---------|
| Flexural Strength | RTD | CRAG 200 | 50 MPa | 7.3 ksi |
| Flexural Modulus | RTD | CRAG 200 | 2.6 GPa | 0.6 Msi |

CURING CYCLES

- Increase air temperature at 2.5°C (4.5°F) /min to 120°C (248°F) and hold for 1 hour.
- Allow to cool to 60°C (140°F) prior to releasing vacuum and removal from mould.



TYPICAL SANDWICH PROPERTIES



TenCate AMLITE SC72A Syntactic epoxy resin core

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 SC72A syntactic core contains a reactive resin system and care must be taken to avoid exothermic heating during the 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.

Revised 08/2013

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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