

# PRODUCT DATASHEET



TENCATE ADVANCED COMPOSITES

## TenCate Amlite SC8020A Low temperature curing syntactic core

### PRODUCT TYPE

70°C to 130°C (158°F to 266°F) cure  
Low temperature curing syntactic core

### TYPICAL APPLICATIONS

- Honeycomb edge filling and splicing
- Honeycomb core stabilization
- Use as a filling core in closed mould operations

### SHELF LIFE

#### Out life

1 month at @ 20°C (68°F)

#### Storage life

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

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

### PRODUCT DESCRIPTION

TenCate Amlite SC8020A is an unsupported epoxy resin film incorporating low density microspheres and is supplied on a roll (15m x 400mm) or in sheets (625mm x 400mm). The material has been developed to offer a long outlife and flexible cure schedules 70°C to 130°C (158°F – 266°F). As a core material in sandwich structures, TenCate Amlite SC8020A 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 Aluminum or Nomex honeycombs, Amlite is a superior alternative. TenCate Amlite SC8020A offers reduced processing, a one shot cure, the ability to anchor inserts or fastenings and increases the opportunity to consider lightweight, thin walled composite sandwich structures. TenCate Amlite SC8020A is compatible for co-cure with TenCate's E720, E722 and 8020 prepreg.

### TENCATE AMLITE SC8020A 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, 1.5 and 2mm ± 10% as standard

Colour..... Charcoal grey

Tack..... Medium

Flexibility..... Pliable at room temperature

Surface weight..... 600 g/m<sup>2</sup> nom. for 1mm thickness

1200 g/m<sup>2</sup> nom. for 2mm thickness

### TYPICAL CURED PROPERTIES

Density.....0.60 g/cm<sup>3</sup> ± 10% depending upon curing conditions

Tg.....Onset: 106°C (222°F) by DMTA

Peak Tan δ: 116°C (240°F) by DMTA

### MATRIX PROPERTIES

Property	Condition	Method	Results	
Flexural strength	RTD	CRAG 200	56 MPa	8.1 ksi
Flexural modulus	RTD	CRAG 200	2.8 GPa	0.4 Msi

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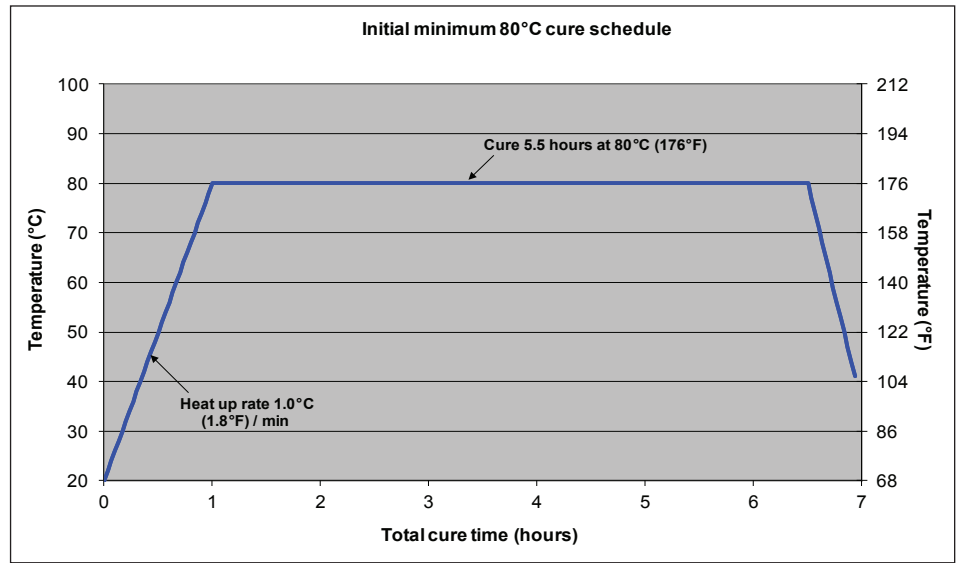
### TYPICAL CURE PROFILES

#### 80°C (176°F) cure temperature

Total time: 7 hours

1.0°C (1.8°F) / minute ramp to 80°C (176°F)

5½ hours dwell @ 80°C (176°F)



#### 120°C (248°F) cure temperature

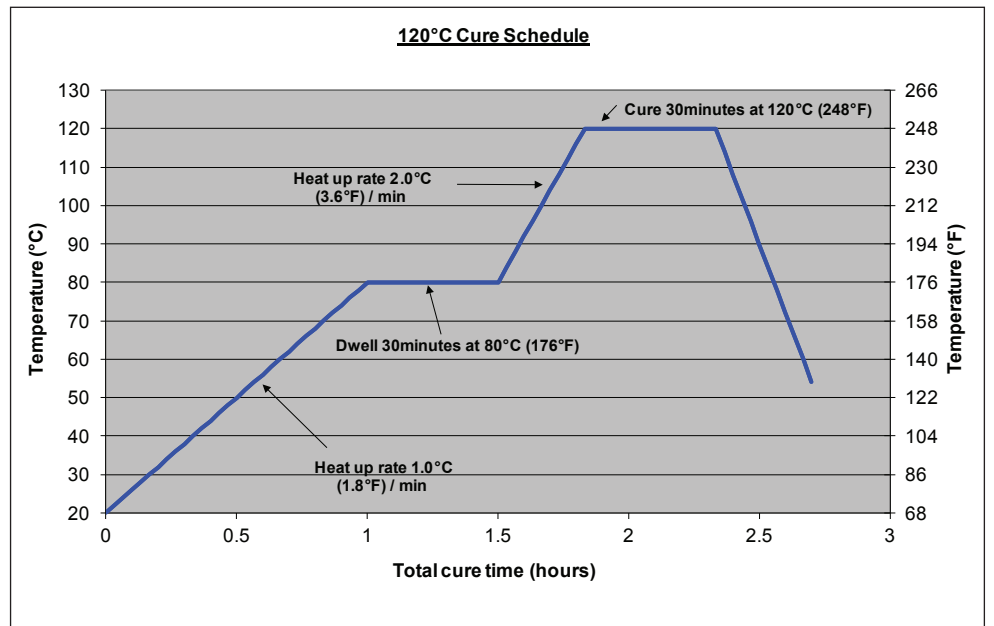
Total time: 2 hr 20 min

1.0°C (1.8°F) / minute ramp to 80°C (176°F)

30 minute dwell @ 80°C (176°F)

2.0°C (3.6°F) / minute ramp to 120°C (248°F)

30 minute dwell @ 120°C (248°F)



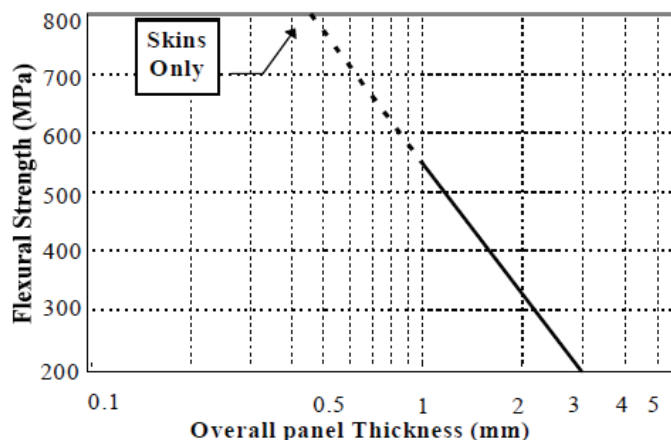
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## TenCate AMLITE SC8020A Low temperature curing syntactic core

### Typical sandwich properties



#### Construction

Skins HS carbon 200gsm 2x2 Twill 8020  
Core TenCate Amlite SC8020A 1 - 3mm  
Cure Vac-Bag/1 bar  
Ramp 2.5°C/min  
5.5 hours @ 80°C

#### Test

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

### 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 SC8020A 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.

Revised 10/2013

*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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## TENCATE ADVANCED COMPOSITES

Amber Drive, Langley Mill  
Nottingham, NG16 4BE UK  
Tel: +44 (0)1773 530899  
Fax: +44 (0)1773 768687

Campbellweg 30  
7443 PV Nijverdal NL  
Tel: +31 548 633 933  
Fax: +31 548 633 299

18410 Butterfield Blvd.  
Morgan Hill, CA 95037 USA  
Tel: +1 408 776 0700  
Fax: +1 408 776 0107

[www.tencate.com](http://www.tencate.com)

[www.tencateadvancedcomposites.com](http://www.tencateadvancedcomposites.com)  
[www.tencateindustrialcomposites.com](http://www.tencateindustrialcomposites.com)  
E-mail: [tcac-us@tencate.com](mailto:tcac-us@tencate.com) (USA)  
E-mail: [ambersales@tencate.com](mailto:ambersales@tencate.com) (Europe)

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