



AMLITE SC8020A

LOW TEMPERATURE CURING SYNTACTIC CORE

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).

APPLICATION

As a core material in sandwich structures, 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. AMLITE SC8020A is available in a variety of thicknesses down to 1mm, is easily contoured and shaped. AMLITE SC8020A offers reduced processing, a one shot cure, the ability to anchor inserts or fastenings and increases the opportunity to consider light weight, thin walled composite sandwich structures. * AMLITE SC8020A is compatible for co-cure with Amber Composites E720, E722 and 8020 prepreg.

PROPERTIES

TYPICAL UNCURED

| | |
|-----------------|---|
| Thickness: | 1mm, 1.5mm 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. |

TYPICAL CURED

| | |
|----------|---|
| Density: | 0.60g/cm ³ \pm 10% depending upon curing conditions. |
| Tg: | 106°C (222°F) by DMTA (onset point). 116°C (240°F) by DMTA (peak tan delta). |



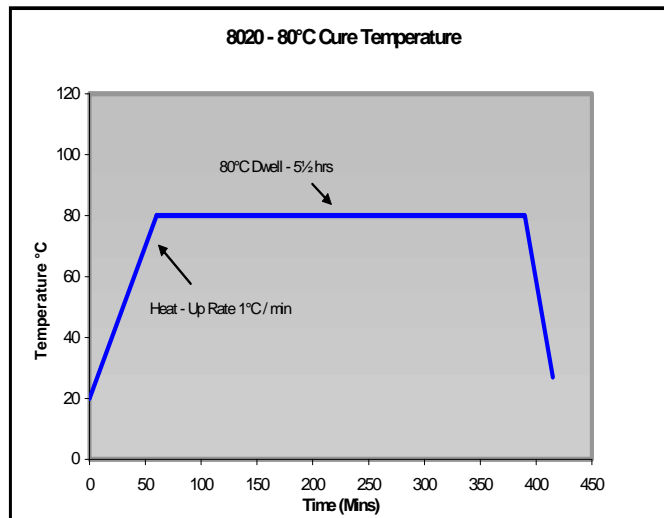
AMLITE SC8020A

LOW TEMPERATURE CURING SYNTACTIC CORE

TYPICAL CURE PROFILES

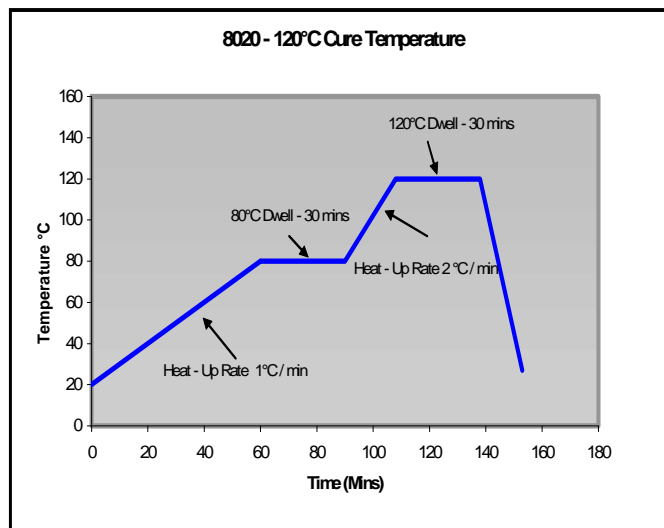
80°C (176°F) Cure Temperature
1.0°C / minute ramp to 80°C
5½ hours dwell @ 80°C

Total time: 6½ hours



120°C (248°F) Cure Temperature
1.0°C / minute ramp to 80°C (176°F)
30 Minute Dwell @ 80°C
2.0C / minute ramp to 120°C
30 minute dwell @ 120°C

Total time: 2 hours 20 minutes



MATRIX PROPERTIES

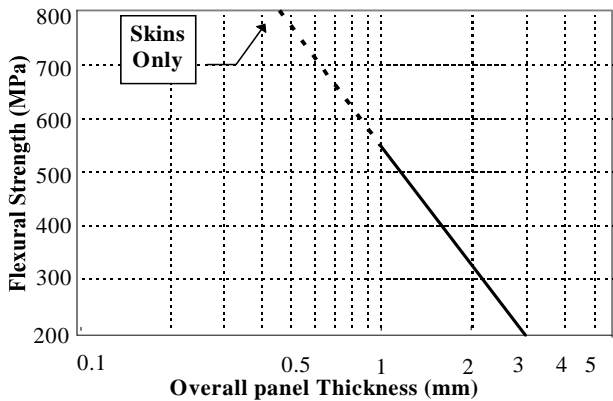
Flexural Strength: 56 MPa (CRAG 200) N.B These properties were achieved
Flexural Modulus: 2.8 GPa (CRAG 200)
Density: 0.60 g/m³ (nominal)



AMLITE SC8020A

LOW TEMPERATURE CURING SYNTACTIC CORE

TYPICAL SANDWICH PROPERTIES



Construction

Skins 200gsm Carbon 2/2/8020
Core 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)

STORAGE

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

WORKING LIFE

1 month 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

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.

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.