

PRODUCT DATASHEET



TENCATE ADVANCED COMPOSITES

TenCate Amspand ES72A-2 Expanding syntactic core

PRODUCT TYPE

125°C (257°F) cure

Expanding 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.

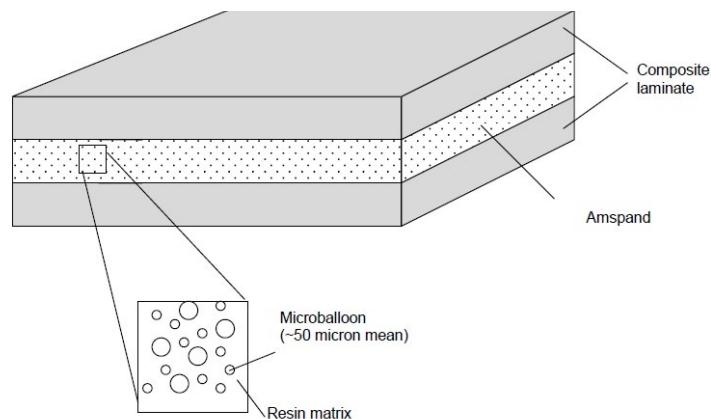
PRODUCT DESCRIPTION

TenCate Amspand ES72A-2 is a 125°C (257°F) curing expanding unsupported epoxy resin film incorporating low density expanding microballons, and is supplied in sheets (625mm x 400mm). TenCate Amspand ES72A-2 expands using a closed cell process ensuring complete homogeneous cell structure, the density/strength may be altered simply by changing cure pressure or limiting the volume available for expansion, the material is capable of expanding up to 650%. TenCate Amspand ES72A-2 is available in a variety of thicknesses down to 1mm and can be easily contoured and shaped. TenCate Amspand ES72A-2 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 structures.

TENCATE AMSPAND ES72A-2 BENEFITS/FEATURES

- Capable of expanding up to 650%**
- Forms a closed cell structure
- Capable of generating internal pressure during cure
- Compatible for co-cure with TenCate's E720 & E722 prepreg
- Density/strength may be tailored by simply changing cure pressure or limiting volume available for expansion
- Minimum of 1 month working life at ambient temperature

** Variations in heat-up rate, cure temperature, pressure and thickness are all factors which influence the expansion (e.g. at 1mm thickness an expansion of 250% can be achieved, increasing the thickness will increase the expansion).



TYPICAL UNCURED PROPERTIES

Thickness.....1, 1.5 and 2mm ± 10% as standard

Colour.....Charcoal grey

Tack.....Medium

Flexibility.....Pliable at room temperature

Surface weight.....900 g/m² nom. for 1mm thickness

1350 g/m² nom. for 1.5mm thickness

1800 g/m² nom. for 2mm thickness

Density.....0.90 g/cm³ nominal

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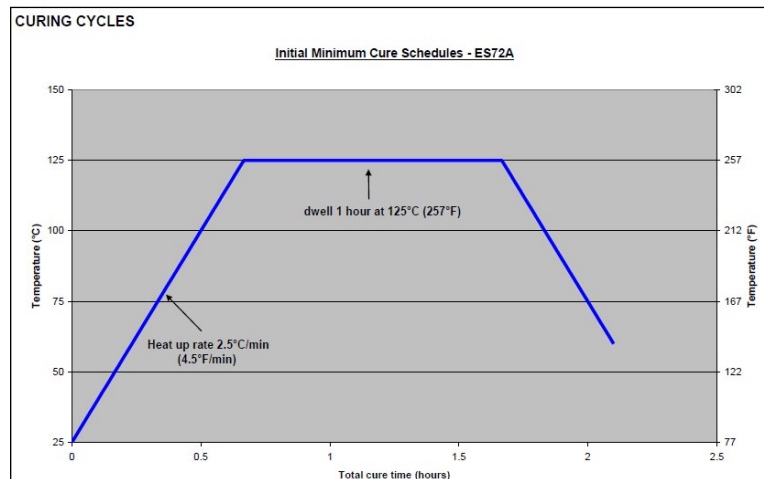
TYPICAL CURED PROPERTIES

Density.....Fully expanded 0.10 to 0.40g/cm³ (variations in heat-up-rate, cure temp, pressure and expansion are all factors which influence the amount of expansion)

T_g.....114°C (237°F) by DSC

CURING CYCLES

- Increase air temperature at 2.5°C (4.5°F)/min to 125°C (257°F) and hold for 1 hour.
- Allow to cool to 60°C (140°F) prior to releasing vacuum and removal from mould.



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 / HANDLING SAFETY

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

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 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.

Page 2 of 2 TENCATE_ES72A-2_V1_DS_082913

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