

PRODUCT DATASHEET



TENCATE ADVANCED COMPOSITES

EM-3 Epoxy Syntactic Film

PRODUCT TYPE

250°F (121°C) Cure Expanding Syntactic Film

TYPICAL APPLICATIONS

- Internal pressure generation in closed mold operations
- Honeycomb edge filling and splicing
- Honeycomb core stabilization
- Used to fill core in closed mold operations

SHELF LIFE

Tack Life

14 days at 75°F (24°C)

Frozen Storage Life

12 months at <0°F (-18°C)

Tack life is the time during which the prepreg retains enough tack, drape and handling for easy component lay-up.

Revised 7/2017

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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PRODUCT DESCRIPTION

TenCate EM-3 is a low density 250°F (121°C) curing expanding syntactic film. It is an effective material in generating internal pressure in closed mold applications, and honeycomb filling, splicing, and stabilization.

EM-3 is available in film form from 12 to 36 inches wide with standard thicknesses of 0.025 and 0.050 inches. Other widths and thicknesses may be available upon request.

PRODUCT BENEFITS/FEATURES

- Fully compatible with most 250°F (121°C) curing epoxy systems.
- Cures fully after 1 hour at 250°F (121°C).
- Excellent tack and drape.
- Meets NASA outgassing (TML/VCM) requirements (ASTM E595).

NEAT RESIN PHYSICAL PROPERTIES

Density (Uncured, nominal) 40.0 pcf (0.64 g/cc)
Expanded Density (Cured) 6.0 to 14.0 pcf (0.10 to 0.22 g/cc)
Volume Expansion Approximately 3 to 8 times

MECHANICAL PROPERTIES

Properties	Condition (RTD, ETD, ETW)	Bulk Density	Results	
Compressive Strength	RTD	6 pcf (0.10 g/cc)	100 psi	0.7 MPa
Compressive Strength	RTD	10 pcf (0.16 g/cc)	300 psi	2.1 MPa
Compressive Strength	RTD	12 pcf (0.19 g/cc)	425 psi	2.9 MPa
Compressive Strength	RTD	14 pcf (0.22 g/cc)	475 psi	3.3 MPa
Flexural Strength	RTD	6 pcf (0.10 g/cc)	100 psi	0.7 MPa
Flexural Strength	RTD	10 pcf (0.16 g/cc)	400 psi	2.8 MPa
Flexural Strength	RTD	12 pcf (0.19 g/cc)	650 psi	4.5 MPa
Flexural Strength	RTD	14 pcf (0.22 g/cc)	950 psi	6.6 MPa
Flexural Modulus	RTD	6 pcf (0.10 g/cc)	8 ksi	55 MPa
Flexural Modulus	RTD	10 pcf (0.16 g/cc)	15 ksi	103 MPa
Flexural Modulus	RTD	12 pcf (0.19 g/cc)	25 ksi	172 MPa
Flexural Modulus	RTD	14 pcf (0.22 g/cc)	35 ksi	241 MPa

TENCATE ADVANCED COMPOSITES

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