

MicroEXpand-116 (MEX-116) is a 125°C curing unsupported epoxy syntactic film incorporating expands using exclusive closed cell process, providing after expansion completely homogenous cell structure (and is supplied in sheets 625 x 400 mm).

The density/strenght may be modified by changing cure pressure and/or limiting the volume available for expansion, the maximum volume expansion rate is about 250%.

MEX-116 offers reduced processing time “one shot cure”, the ability to anchor inserts or fastenings and increases the opportunity to consider light weight, thin walled composite structures.¹

SHELF LIFE



OUT LIFE
6 weeks @ 21 °C



STORAGE LIFE
12 months @ -18 °C

TYPICAL APPLICATIONS



CLOSED MOLD
LAY-UP

MEX-116 is cut to fit the X/Y dimensions of the mold or cavity. If MEX-116 is not intended to bond to the mold, pre-treat the mold with an appropriate release agent.

FEATURES



INTERNAL PRESSURE GENERATION DURING CURE LEAD TO EXPANDING CAPABILITIES UP TO 250%²



DENSITY/STRENGTH MAY BE TAILORED BY SIMPLY CHANGING CURE PRESSURE AND/OR VARIATION IN VOLUME AVAILABLE FOR EXPANSION



FLEXIBILITY
(FOLDABLE AT ROOM TEMPERATURE)



COLOUR: CHARCOAL GREY



MAXIMUM TG (DSC): 110-115°C

- 1 The system is not designed for cosmetic application, if this application is needed please contact our Technical Department .
- 2 Factors that affect the final expansion are heat-up rate, cure temperature, pressure and thickness ; the maximum “in thickness” expansion rate is up to 250% .

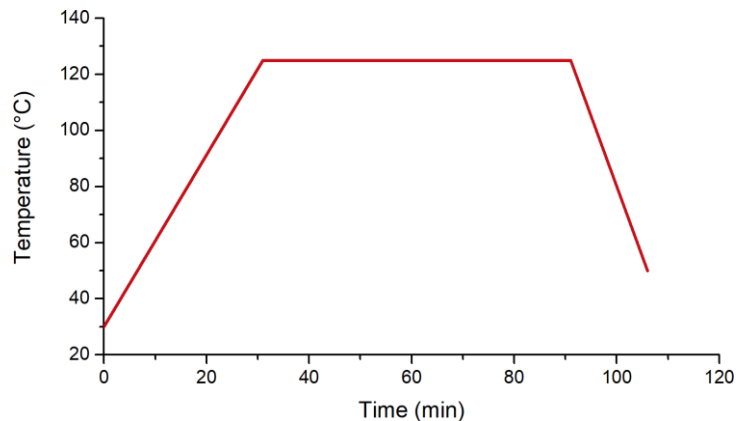
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MATRIX PROPERTIES

Density @ RT: average uncured 0,82 g/cm³; fully expanded cured from 0,25 to 0,45 g/cm³.³

INITIAL MINIMUM CURE SCHEDULE

- Heat ramp 3°C/min RT-125°C
- Hold for 1h
- Cool ramp 5°C/min until 50°C



AVAILABILITY

Standard Product Variants

EP-116-MEX-010: 1.00 mm thick unexpanded, unsupported film

EP-116-MEX-020: 2.00 mm thick unexpanded, unsupported film

Other thickness available upon request

PRECAUTIONS FOR USE

The usual precautions when handling uncured resins and fibrous materials should be observed, and a Safety Data Sheet is available for this product.

SDS Reference Codes: MEX-116: SDS-454

STORAGE CONDITIONS

This prepreg should be stored as received in a cool dry place or in a refrigerator.

After removal from refrigerated storage, prepreg should be allowed to reach room temperature before opening the polyethylene bag, thus preventing condensation (a full roll in its packaging can take more than 1 day).

³ Cured at 4 bar. Variations in heat-up rate, cure temperature, pressure and thickness are all factors that influence expansion.