

**NEMpreg.FR1011**

**FIRE RETARDANT PREPREG BASED ON EPOXY RESIN**

**DESCRIPTION**

NEMpreg.FR1011 is an advanced single-sided fire retardant prepreg based on epoxy resin system and complies with HL3 requirements according to PN-EN45545-2 standard. Dedicated to the sandwich structures combined with different materials, e.g. woods, plastics or metals. Designed to create the fireproof components for public transportation and construction.

**TYPICAL USE**

Highly fire retardant elements:  
public transport, construction, automotive and industrial applications



**FEATURES**

- fire retardant prepreg (up to HL3 acc. PN-EN45545-2)
- snap cure prepreg (8 min. at 120°C)
- out life up to 14 days at 20°C
- non tack
- stiff prepreg

**DEDICATED TECHNOLOGY**

hot press molding

**OUT LIFE (20°C)**

14 days

**SHELF LIFE (-18°C)**

6 months

**Tg**

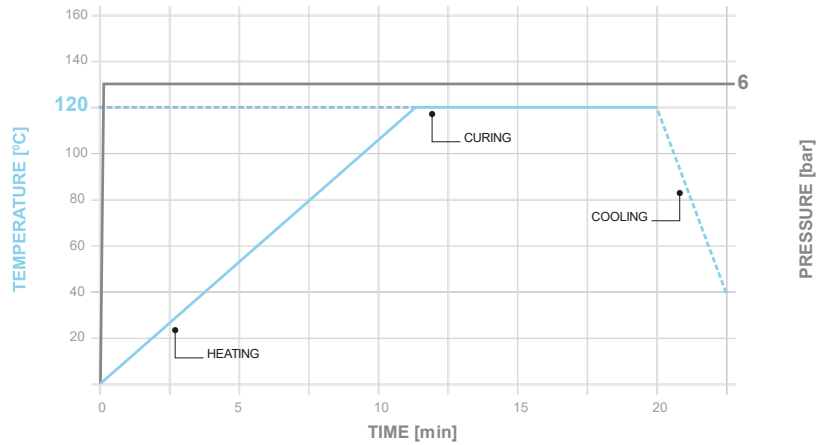
120°C

**REINFORCEMENT**

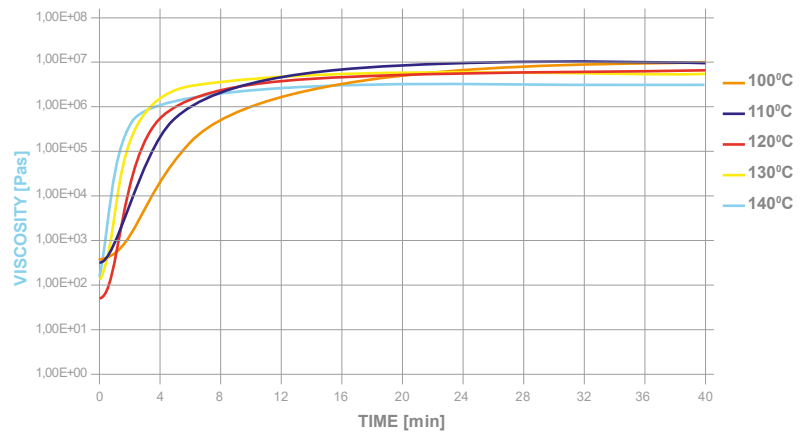
glass from 300gsm to 600gsm

## RECOMMENDED CURING CYCLE

1. Apply 4-10 bar of pressure (6 bar is recommended)
2. Heat at 5-30°C/min up to 120°C
3. Hold at 120°C for 8 minutes
4. Cool down to 60°C or below

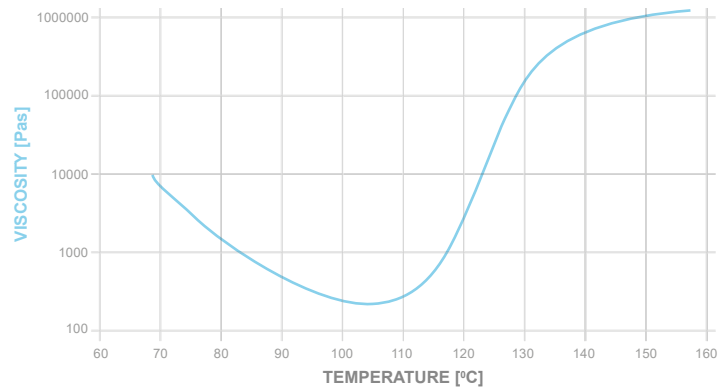


## ISOTHERMAL CURING



## DYNAMIC CURING

Resin viscosity profile conducted at 10°C/min.



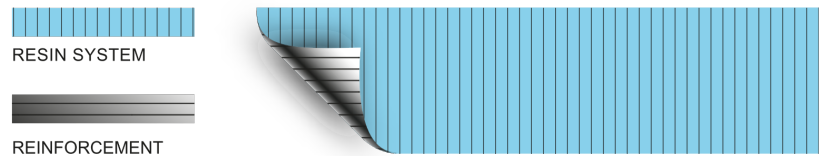
## MECHANICAL PROPERTIES

Laminates cured using a hot press molding technique according to the cycles presented above.

PROPERTY	UNIT	DESCRIPTION	TEST STANDARD
Fiber type	N/A	glass	N/A
Area weight	g/m <sup>2</sup>	350	N/A
Weave	N/A	twill 2/2	N/A
Resin content	%	48	N/A
Tensile strength	MPa	300	ISO 527-4
Tensile modulus	GPa	13.6	ISO 527-4
Flexural strength	MPa	350	ISO 14125
Flexural modulus	GPa	16.7	ISO 14125
Tg (DMA)	°C	120	ISO 6721-1

## APPLICATION

Be aware that the resin system is applied only on one side of reinforcement. It is recommended to apply the NEMpreg on the reinforcement side to the mold surface.



## STORAGE CONDITIONS

Keep the NEMpreg in the original bag at operating temperature before unpacking. NEMpreg can be stored for 14 days at 20<sup>0</sup> C, or 6 months at -18<sup>0</sup> C. After removal from refrigerator storage, prepreg should be allowed to reach room temperature before opening to prevent water condensation. When not in use, NEMpreg must be covered by protective foil to prevent the inner structure from humidity. If the moisture level is too high, it can result in superficial and internal defects in the finished product.

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## ATTENTION

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The above information concerning our products is based on our present-day knowledge, research results and experiences and are presented in good faith in accordance with the company's practices. The proposed procedures are considered to be commonly applied. However, any user should verify, if the delivered material is suitable for the intended application. This should take place according to current industrial standards and norms, including examinations of the final product. Neither the company nor its representatives shall be liable for any direct, indirect, punitive, incidental, special consequential damages, to property or life, whatsoever arising out of or connected with the use or misuse of the company's products.

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