EnableX™
prepreg molding system

Fast Cure Phenolic

Near Net Shapes With Prepregs?

EnableX™ is a breakthrough from Norplex Advanced Composites that allows continuous fiber prepreg to be co-cured in a multi-material molding system to produce near net shapes. Building upon the predictability of continuous fiber reinforced prepreg, EnableX™ materials are:

- Specifically designed for compression molding
- Tested to ensure compatibility
- Supported by our team of application engineers

Additionally, like all Norplex Advanced Composites materials, our in-house laboratory and development capabilities allow for new concepts to be prototyped, or specific datasets to be developed to support specific design criteria.

Enabling The Benefits Of Composites

Norplex Advanced Composites is dedicated to producing high performance thermoset composite materials. EnableX™ is the latest generation of products specifically designed to bring affordability and mass production scale to markets seeking the many advantages of composite materials, such as:

- Superior specific strength and stiffness
- Inherent chemical resistance
- Excellent dielectric properties
- Self-lubricating and low wear
- Low FST generation

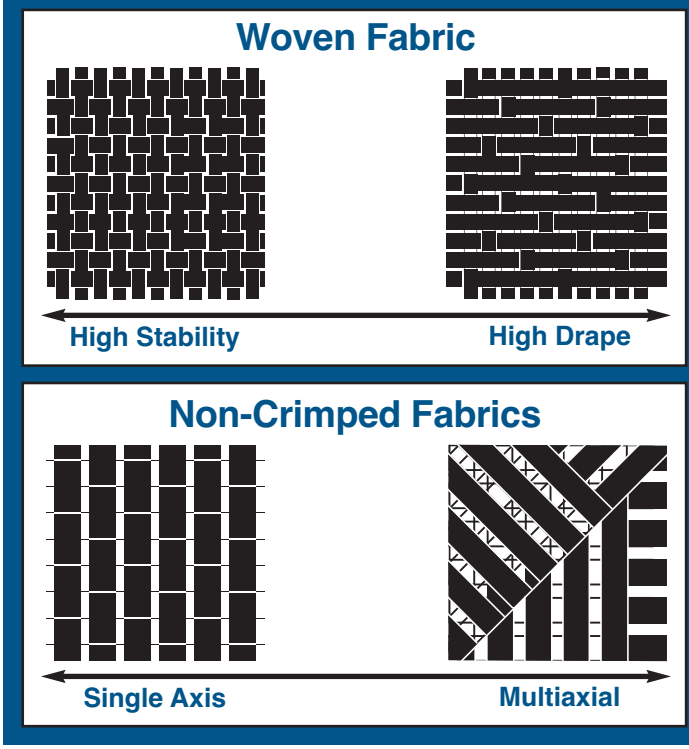
Collaborative Design Approach

Norplex Advanced Composites welcomes the opportunity to work with composite design veterans and those new to working with composites. We follow your lead and adapt our development approach to match your timeline and budget.

Generally, the first step is to determine the appropriate resin matrix. EnableX™ has been verified on several different epoxy, phenolic and vinyl ester resin systems, and more are always in development. Many of these materials have been tested and can serve as a baseline for virtual modeling. Moreover, these materials are readily available to accelerate the design timeline through physical prototyping.

Reinforcement options for EnableX™ are essentially limitless. From carbon, to glass, to natural fibers such as cotton or paper, and then to fibers that significantly alter the behavior of the material such as PTFE or thermoplastics, are available in the EnableX™ system. Beyond the fibers themselves, different architectures and hybridizations of reinforcements further open the design window.

A visual representation of major fabric options.



170 Wooden Shoe Lane
Manhattan, MT 59741

P: +1.563.864.7328
info@norplex.com
norplexadvanced.com

NORPLEX ADVANCED COMPOSITES

Fast Cure Phenolic

EnableX™
prepreg molding system

Property Tested Physical Property	Test Method		Units	10 oz WR - 30% Resin		
Specific Gravity	ASTM D792		–	1.81		
Moisture Absorption	ASTM D570	Condition A	%	2.68		
Rockwell Hardness	ASTM D785	.250" Build-up	M Scale	97		
Tensile Strength LW/CW	ASTM D3039	Condition A	psi	45,500	/	33,700
Hot Tensile Strength LW/CW	ASTM D3039	@155 °C	psi	30,200	/	23,200
Tensile Modulus LW/CW	ASTM D3039	Condition A	kpsi	2,970	/	2,740
Hot Tensile Modulus LW/CW	ASTM D3039	@155 °C	kpsi	2,960	/	2,850
Flex Strength LW/CW	ASTM D790	Condition A	psi	26,200	/	25,500
Hot Flex Strength LW/CW	ASTM D790	@120 °C	psi	20,700	/	19,600
	ASTM D790	@135 °C	psi	20,700	/	19,600
	ASTM D790	@155 °C	psi	19,500	/	17,900
	ASTM D790	@175 °C	psi	19,100	/	18,600
Flex Modulus LW/CW	ASTM D790	Condition A	kpsi	2,570	/	2,570
Hot Flex Modulus LW/CW	ASTM D790	@120 °C	kpsi	2,240	/	2,180
	ASTM D790	@135 °C	kpsi	2,250	/	2,230
	ASTM D790	@155 °C	kpsi	2,150	/	2,150
	ASTM D790	@175 °C	kpsi	2,150	/	2,140
Compressive Strength	ASTM D695	Condition A	psi	82,000		
Hot Compressive Strength	ASTM D695	@155 °C	psi	61,600		
Compressive Modulus	ASTM D695	Condition A	kpsi	770		
Hot Compressive Modulus	ASTM D695	@155 °C	kpsi	570		
Impact Strength LW/CW	ASTM D256	Condition A	ft-lb/in	31.4	/	20.8
Short Beam Shear LW/CW	ASTM D2344	Condition A	psi	1,860	/	1,180
Thermal Property	**Test Method**		**Units**	**10 oz WR - 30% Resin**		
Tg by DMA	ASTM D7028	Condition A	°C	125		
Flammability	UL Bulletin 94	Condition A	Class	HB		

Data above are values for the pre-preg only. Incorporation of other materials, geometry, and process variables may affect the apparent properties in any specific part. Norplex Advanced Composites applications engineers are available to support your analysis and design processes.

Disclaimer
This data, while believed to be accurate and based on reliable analytical methods, is for informational purposes only. The terms and conditions of the agreement under which it is sold will govern any sales of this product. Data supplied above are "typical values"; not to be considered "specification values".

To assure the material's performance is adequate for a specific application; customers should verify, independent of Norplex Advanced Composites, performance characteristics of interest.

It is the responsibility of the users of this information to make sure that they have the latest version of this TDB, and are urged to check with Customer Service or, preferably our web site, www.norplexadvanced.com, to determine if the information is the most current available.

Specification writers: Contact Norplex Advanced Composites for specification values before submission.

Full Application Engineering Support

For help determining the best EnableX™ solution for your needs, please contact a member of our application engineering support team at norplexadvanced@norplex.com.

170 Wooden Shoe Lane
Manhattan, MT 59741

P: +1.563.864.7328
info@norplex.com
norplexadvanced.com

NORPLEX ADVANCED COMPOSITES