

Norplex-Micarta is a leading manufacturer of high performance thermoset composite materials based on impregnation and lamination technology.

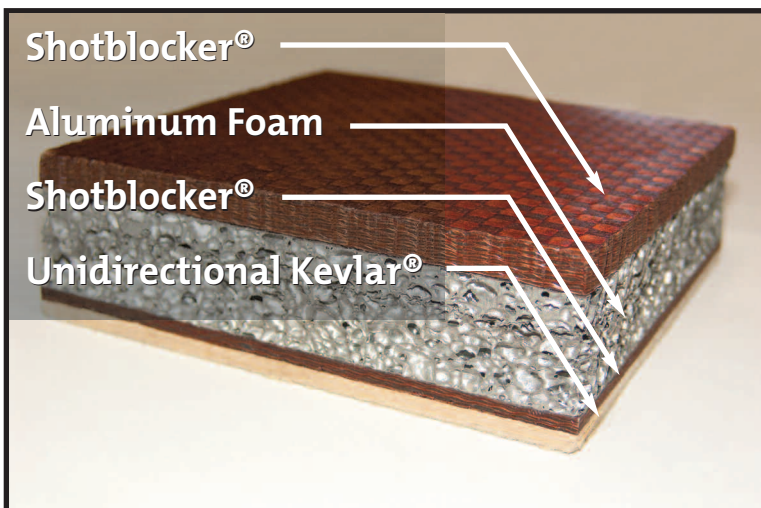
When designing with composites, the possibilities are nearly endless. Norplex-Micarta has hundreds of standard materials that can be used as a starting point to baseline an application. We then work collaboratively with designers to analyze the design hurdle, identify material and process options, and establish a validation and verification plan. All of this is done with economics and ongoing mass production in mind from the start, with a company that has invested specifically to produce thermoset composites consistently, economically, at scale.

A diverse set of inputs allows for a wide range of functionality

The starting point for designing a material is selecting the right inputs: the resin matrix and the reinforcement. Norplex-Micarta's approach to manufacturing pre-preg allows for woven, non-woven, non-crimped, and hybrid reinforcements on resin systems that are established and proven in some of the most difficult applications that exist. Resin systems include epoxy, phenolic, melamine, silicone and dozens of modifications of these base systems. Reinforcements are even more numerous, ranging from natural fibers such as cotton and paper, to glass and carbon, to PTFE and other synthetic materials.

New material designs, even multi-material and hybrid options, are Norplex-Micarta's specialty.

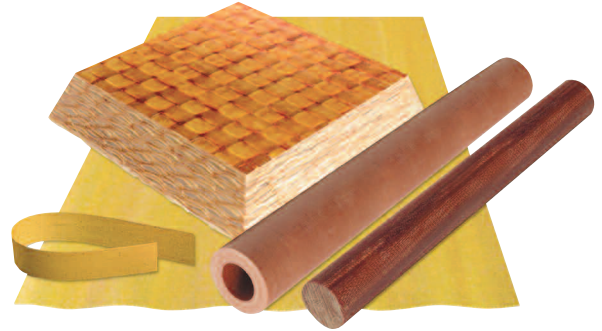
An example of how Norplex-Micarta makes multi-material options a reality



This material was developed to meet the needs of a very specific application. Combining several distinctly different materials together allowed designers to simplify the fabrication of parts – all while significantly enhancing the performance over what any one material could do on its own. Norplex-Micarta's materials are used not only to hold the overall laminate structure together, but also as a functional component in the system.

Innovation backed by over 100 years of experience

Norplex-Micarta produces thermoset composite pre-pregs, sheets, and shapes from facilities in North America and China. Utilizing several different resin systems on nearly limitless different reinforcements, we offer to industry unrivaled repeatability, scalability, and affordability. From demanding high voltage equipment, to the cold of space, to the pressure of oil and gas exploration in the depths of the earth and nearly everywhere in between, thermoset composites can be engineered to your specific requirements.



pre-pregs

Pre-pregs have the greatest strength to weight ratio of any composite material. Norplex-Micarta produces pre-preg in a solution coating process. Compared with other pre-preg manufacturing techniques, this method assures even resin impregnation, fast production speeds, and normally results in a tack free pre-preg that is well suited for high volume, automated, fabrication.

sheets

Manufactured from Norplex-Micarta's pre-pregs, sheet products provide unique advantages to designers of composite parts and structures. They are readily available for fabrication into parts by standard machining processes, available in high volumes, and easily customized with different surface or core materials, including traditional materials like rubber or metals.

shapes

Also manufactured from Norplex-Micarta's pre-pregs, stock shapes are readily available. These include tubes, rods, springs, and other geometries. Like flat sheet materials, these stock shapes can be fabricated easily, and can be customized to meet the requirements of a specific application.

Norplex-Micarta's standard materials provide a baseline for design and development work

Designing a composite part is in some ways a designer's dream, with nearly infinite combinations of materials that can be utilized to achieve specific design goals. This flexibility also presents a challenge—specifically, how to choose the inputs and build the composite most suitable for an application? Norplex-Micarta's approach is to partner with and assist designers in this process. Our team of applications engineers work with designers to narrow the range of options, and help to develop datasets, models, and/or prototypes that allow for quick initial evaluation. If a standard material isn't the solution, we then work collaboratively with designers on their specific application.

Contact Norplex-Micarta today to learn more about how our thermoset composites can help you achieve your design and development goals!

665 Lybrand Street | PO Box 977 | Postville, Iowa 52162 | P: +1.563.864.7328