



**High Performance
Thermoset Composites**



**High Performance
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For the Ballistic Protection Industry**



ShotBlocker

ShotBlocker meets UL-752 performance level standards for ballistic levels 1- 5, and is certified in accordance with the National Institute of Justice NIJ-STD-0108.01 standards. Additionally, ShotBlocker produces no toxic fumes when burned, meeting Federal Aviation Regulation 25.853 for commercial aircraft compartment interiors.

ShotBlocker is offered as either a fully-cured, rigid sheet, or a pre-preg, which melts and cures when the appropriate temperature and pressure is applied. For pre-pregs, the material is shaped to contours in standard molding dies by application of heat and pressure for only a few minutes. Pre-saturated layers of fiberglass textile are stacked in open dies to the required thickness. ShotBlocker is typically manufactured to a specific thickness requirement, depending on the weapon threat and customer specifications.

The ballistic protection industry requires high performance thermoset sheets, pre-pregs, and molded shapes that can withstand the most destructive military and civilian security applications. Major considerations include 1) resistance to a projectile or blast, fire, and forced entry; 2) ease of installation; 3) weight; and 4) cost and availability. Norplex-Micarta offers advanced fiberglass-based materials that meet these demanding specifications.

Norplex-Micarta manufactures the only commercially available Class 1-A fire- and smoke-rated building material (ASTM E84) that is resistant to projectiles, ricochet, heat, and fire. Norplex-Micarta's ShotBlocker™ product is a self-extinguishing thermoset composite that will not catch on fire or give off toxic smoke when exposed to intense heat, making it ideal for all types of civilian and military/defense applications.

ShotBlocker can be manufactured in five levels of bullet-resistance depending on the weapon threat and security function. The material can be cut and drilled in the field with commercial quality circular, table, or panel saws and readily covered with decorative plastic laminates using mechanical fasteners or adhesives. For aesthetic conformity, ShotBlocker can be surfaced on site with veneer, drywall, wallpaper, or other wall covering.

Glass fabric-based, anti-ballistic materials, such as ShotBlocker, are one-third the weight of ballistic steel armor plate, but still provide the same level of protection. The lower weight makes the material less cumbersome to fabricate, handle, and install. The combination of light weight and robust threat protection makes ShotBlocker well-suited for some architectural applications that would not be possible with heavier ballistic steel.

Anti-ballistic fiberglass composites are also much less expensive than many conventional armor alternatives. Low cost and short lead times make ShotBlocker an increasingly popular choice to protect valuable assets from ballistic threats.



Architectural Applications

Norpflex-Micarta's *ShotBlocker* material is specified for courtroom, check-cashing, gas station, and convenience market armor, providing superior security and protection in walls, doors, and counters. Additionally, *ShotBlocker* can be used for military/defense architectural applications in the field to fortify guard stations and other military structures. Overall, the performance of the new composites is similar to that of conventional S-2 glass laminates that cost considerably more.

Military Engineers use *ShotBlocker* to fortify guard stations and other structures.



ShotBlocker withstands the impact from a close-range .30-06 bullet.

Architects routinely specify *ShotBlocker* for ballistic protection in public areas such as courtrooms.



Product Specification Table

Product	UL-752 Performance Level Standard	NIJ 0108.01 Performance Level Standard	Ballistic Requirements				Nominal Thickness
			Weapon	Weight	Designation*	Speed	
<i>ShotBlocker</i> 01	Level 1		9mm	124 gr lead	FMJ	1175 ft./sec.	1/4"
<i>ShotBlocker</i> 02	Level 2	Type IIA	.357 mag	158 gr lead	JSP	1250 ft./sec.	11/32"
			9mm	124 gr lead	FMJ	1090 ft./sec.	11/32"
<i>ShotBlocker</i> 03	Level 3	Type II	.44 mag	240 gr lead	SWC/GC	1350 ft./sec.	7/16"
			.357 mag	158 gr lead	JSP	1395 ft./sec.	7/16"
		Type IIIA	9mm	124 gr lead	FMJ	1175 ft./sec.	7/16"
			.44 mag	240 gr lead	SWC/GC	1400 ft./sec.	7/16"
<i>ShotBlocker</i> 04	Level 4	Type III	.30 cal	180 gr lead	LSP	2450 ft./sec.	1-3/16"
	Level 5		7.62mm	150 gr lead	FMJ	2750 ft./sec.	1-3/16"

*Nomenclature: FMJ = full metal jacket LSP = lead soft point
 GC = gas-checked SWC = semi-wadcutter
 JSP = jacketed soft point

Refer to our web site www.norpflex-micarta.com for a complete list of our products.



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