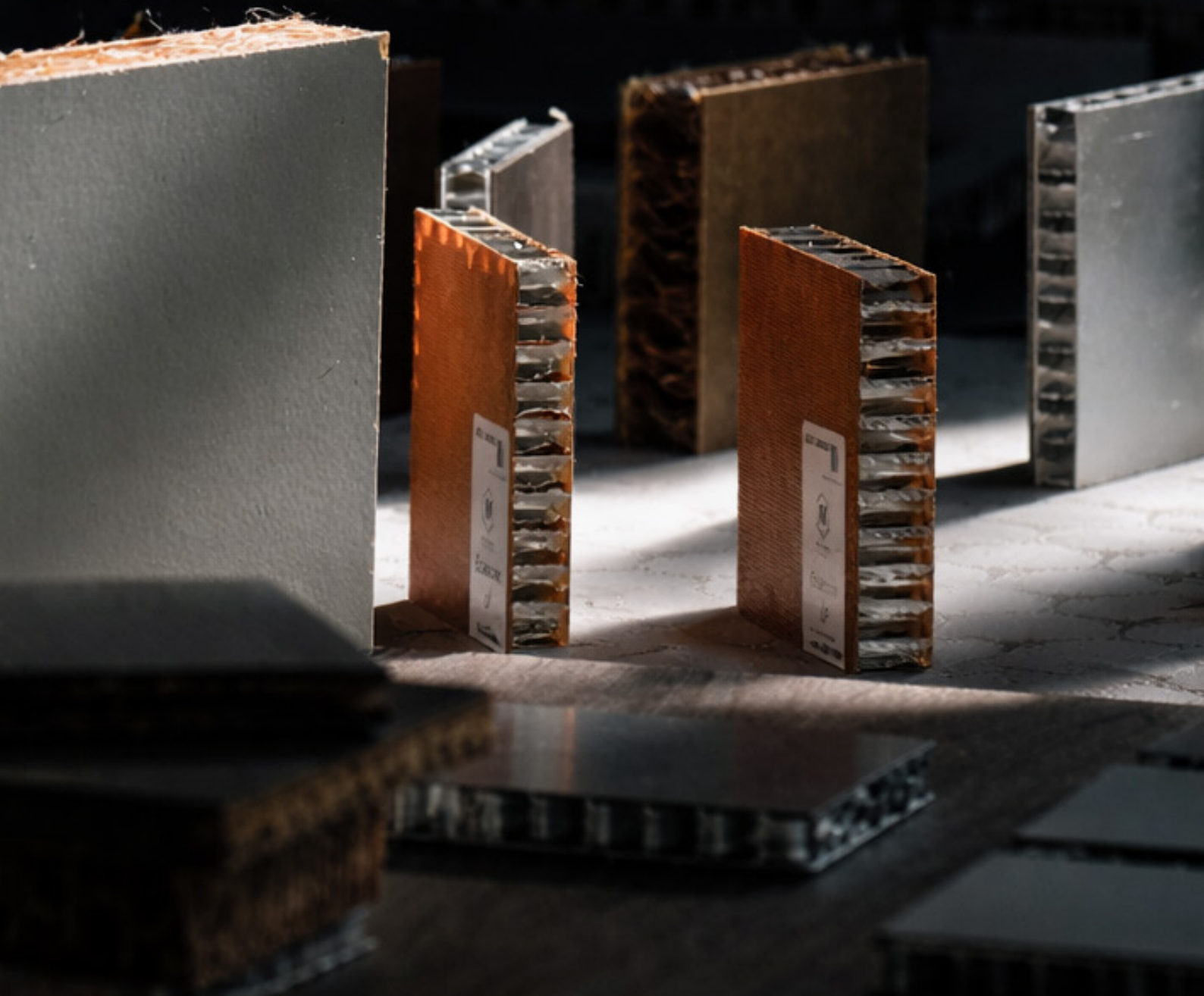


Abet High Tech Solutions

LEADING INNOVATION WITH COMPOSITE TECHNOLOGIES.



www.abethts.com
www.abethtsusa.com

 **ABET HTS**
DEFENSE

Company Overview

ABET HTS, a mid-sized multinational with a€15M turnover, is part of ABET GROUP, a€250M **family-owned company** specializing in laminated panels for furniture, design, and construction. The Group maintains substantial private financial capacity, with **all strategic defense production based in Italy, aligning with EU Military Committee and NATO standards for strategic suppliers and alliances.**

ABET HTS manufactures panels, composites, and structural systems using a mix of light metals, honeycomb, textile fibers, armored steel, and special resins.

The Company **has an internal technical department with enhanced specific design and engineer skills** (simulations and computational ballistic fluid dynamics).



Our Production

In recent years, **HTS** has been present in the **Defense sector**, specifically in Italy, evolving from its core competencies in press rolling and lamination to produce **lightweight high protection panels, structures and armored bodies: ballistic, blast resistant and incombustible** and achieve a 30% weight reduction by reducing steel content.

Investments fully granted by the Group finances, **HTS now manufactures wearable knife- and bullet- proof jackets for soldier protection.**

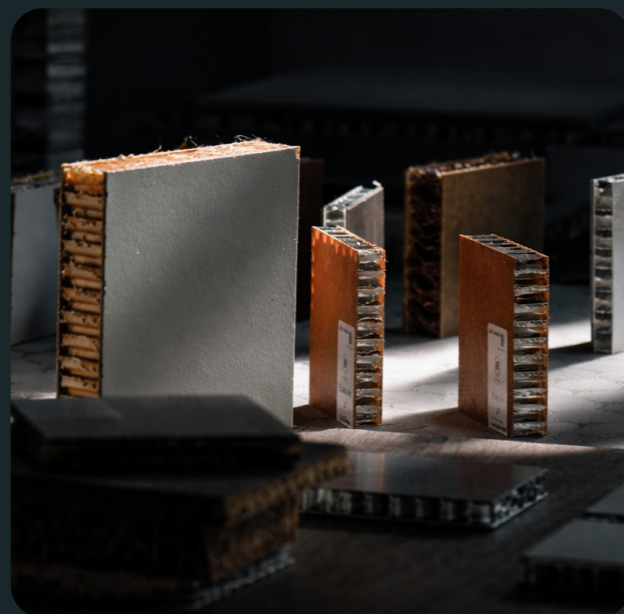
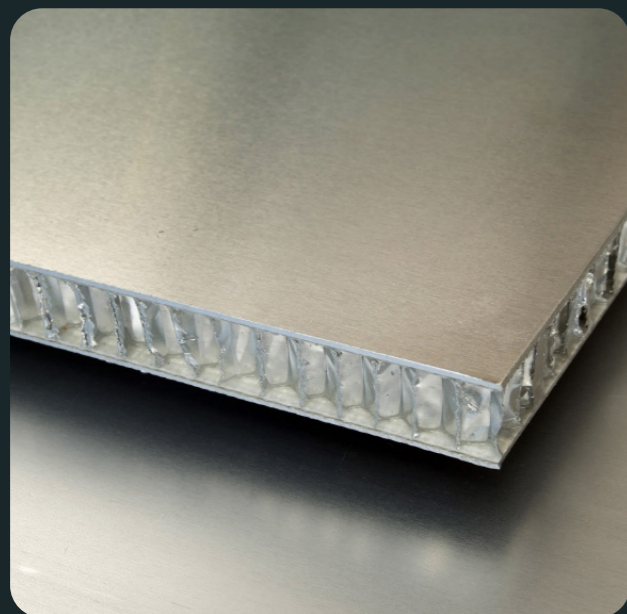
Leveraging its mechanical expertise and diversified capabilities, HTS has also **developed highly versatile and innovative unmanned ground and amphibious vehicles (UGVs) for multi-purpose use.**

1

Leading manufacturer of **lightweight, sandwich, composite panels** and mechanical structures.

2

With **advanced hybridization capabilities** to bring together diverse materials to achieve high-performance solutions.



Strategic Areas

AICS (Armored Infantry Combat System) and MBT (Main Battle Tank): External Retrofitted Hull protections and body parts.

Basic Blast and Fragmentation Mitigation Infrastructures.

Additional engineered protection for Middle Life Armored vehicles or trucks.

UGV's and system integration for Troops on the Ground (Logistic or Combat configurations).

Ballistic cells for ships and underwater (shooting computers and (or ammunition storehouse).

Retrofitting (light ballistic protection) for Helicopters

Shooting Houses for live fire training.

Soft ballistic infrastructure (Command Post; vehicles or aircrafts).

Customized Solutions



1
At ABET HTS we offer **tailor-made products for your specific technical and structural needs.**

2
With the use of innovative materials, customized technical solutions and project- based processing, **we deliver versatile, durable, and lightweight components.**

Abrasion Resistance

Amagnetic

Thermal Resistance

Acoustic

High Mechanical Resistance

Fatigue Resistance

Ballistic Panels and Armored Bodies

Metalleido Lamishield includes an array of components for wide bodies:

Armored Tanks And Vehicles

Helicopter Cellars And Seats

Civil And Military Infrastructure

Foldable, and Transportable for Hangar

Ship Reinforcement

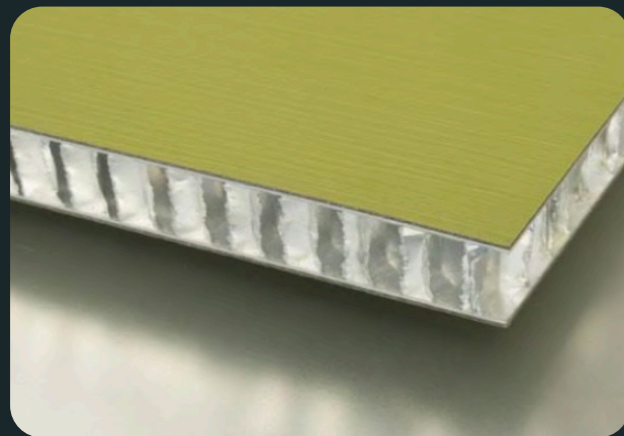
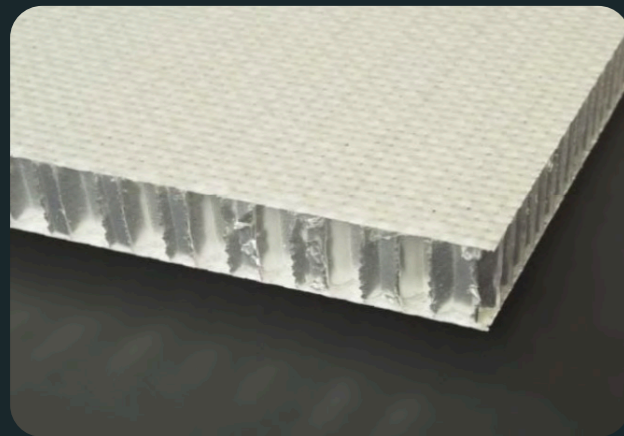
Helicopter Landing Mat

Aluminum Honeycomb Panels

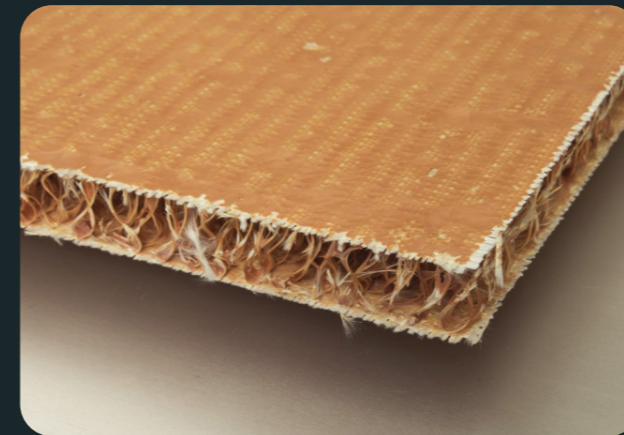
ABET HTS specializes in Aluminum Honeycomb panels with a vast range of finishes, from HPL to fiber-cement.

Our lamination and hybridization capabilities allow us to tailor solutions to specific structural needs.

Aluminum Honeycomb panels offer **high strength-to-weight ratio**, making them ideal for modular and partition walls, with excellent structural capacity for diverse construction applications.



Textile Fiber Panels



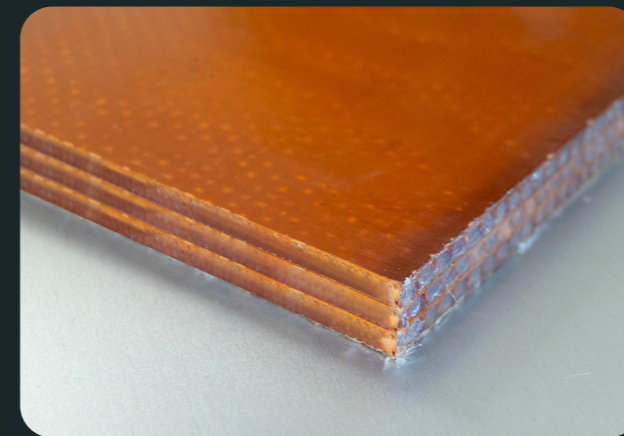
MONOCORE® 3D

An integral sandwich panel based on three-dimensional glass fabric impregnated with phenolic resin patented and industrialized



MONOCORE® 3D FP

A multilayer sandwich panel obtained using three layers of 6 mm glass fabric to which three glass fabric mats are added which give the panel greater resistance to both bending and compression and a high bending strength.



MONOCORE® 3D ACUSTIC

A multilayer sandwich panel obtained using three layers of 6 mm glass fabric to which three glass fabric mats which are filled with micro spheres to add greater acoustic characteristics to the panel.

Ballistic Panels and Armored Bodies

The ABET HTS ballistic panels offers a **unique and fully customizable ballistic protection system**.

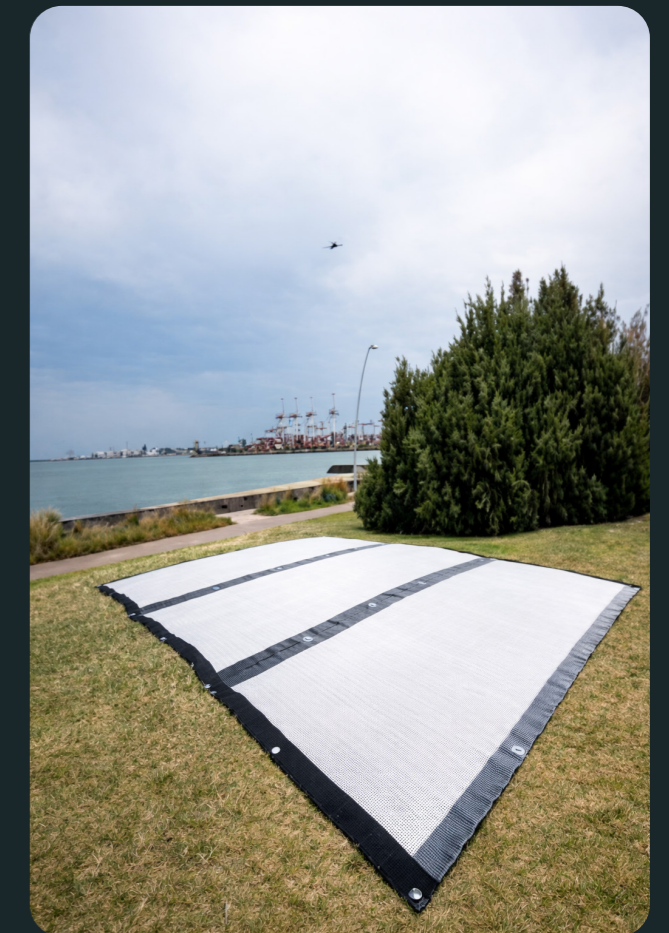
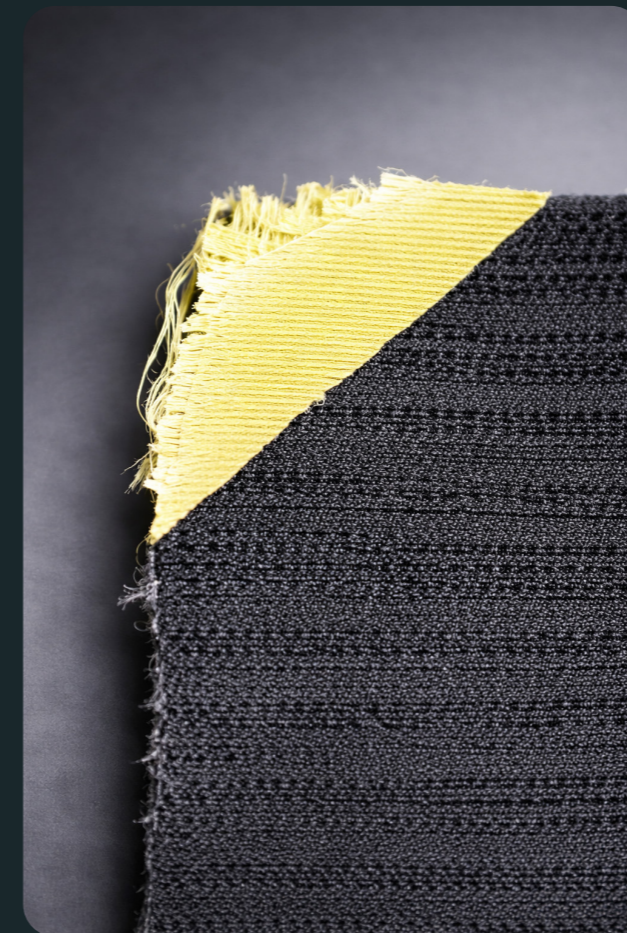
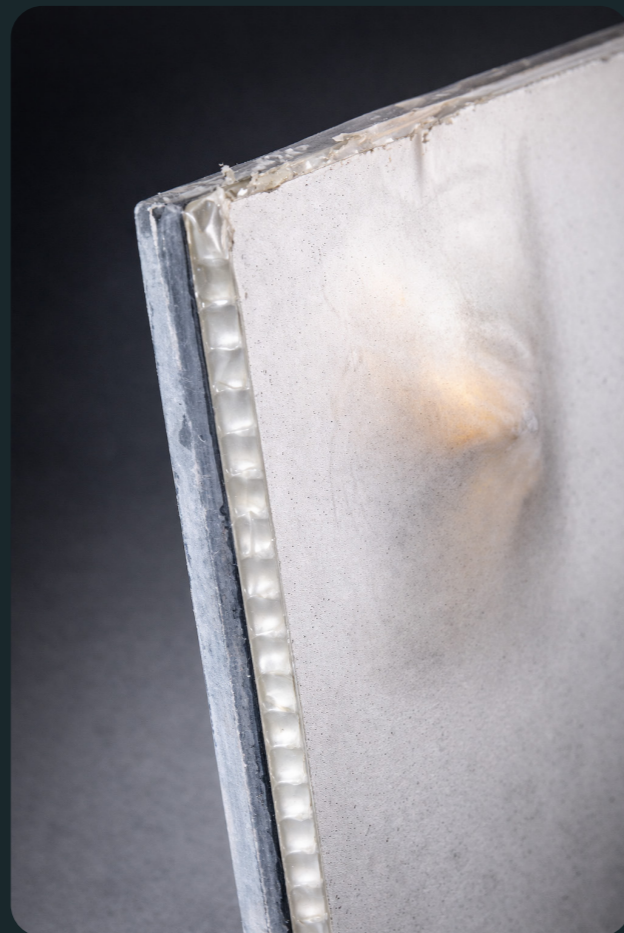
This system is based on an innovative concept of **lamination and hybridization of multiple materials (including glass, ceramic, steel and polymers)**.

The standard method offers maximum protection against small arms to large calibers.



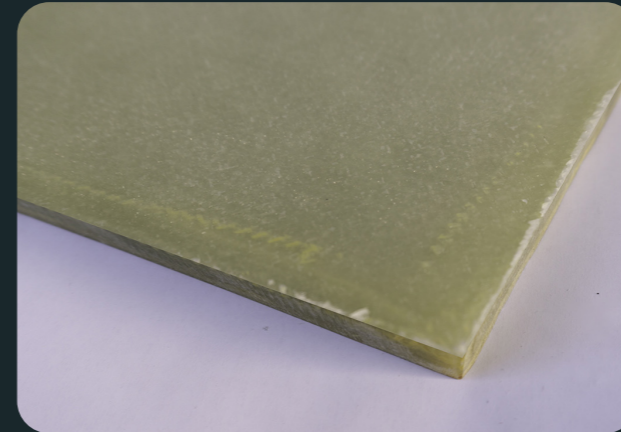
Ultra-light, ultra-thin, high-strength ductile combined impregnated fabric: **anti-cut and anti-puncture; anti-splinter:** barrier for high-speed debris.

Energy dissipation in tension, adaptable 3D surface. High mechanical and abrasion resistance.



Ballistic Panels and Armored Bodies

Structural panels with fireproof and high temperature resistant properties



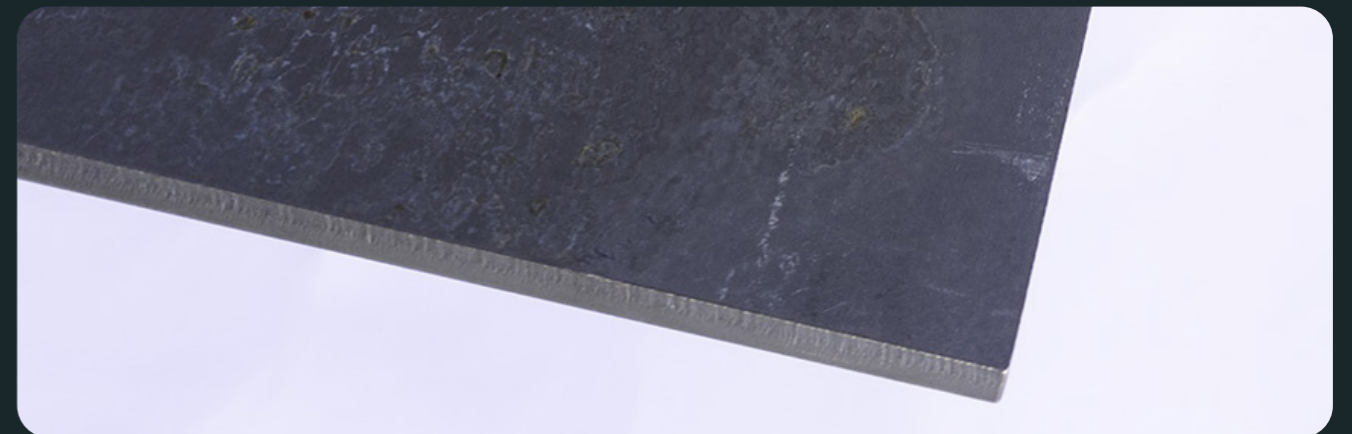
At ABET HTS, we provide a range of ballistic panels tailored to specific protection needs, including ballistic steel, **ballistic fiberglass**, and **high-density polyethylene panels**.



Each panel type is optimized for different applications and requirements, **offering adaptable protection levels in line with UL752 and NIJ ballistic standards**.

Upon request, we also offer STANAG 2280 blast-resistant solutions.

Contact us to discuss your specific protection needs and explore customized solutions.



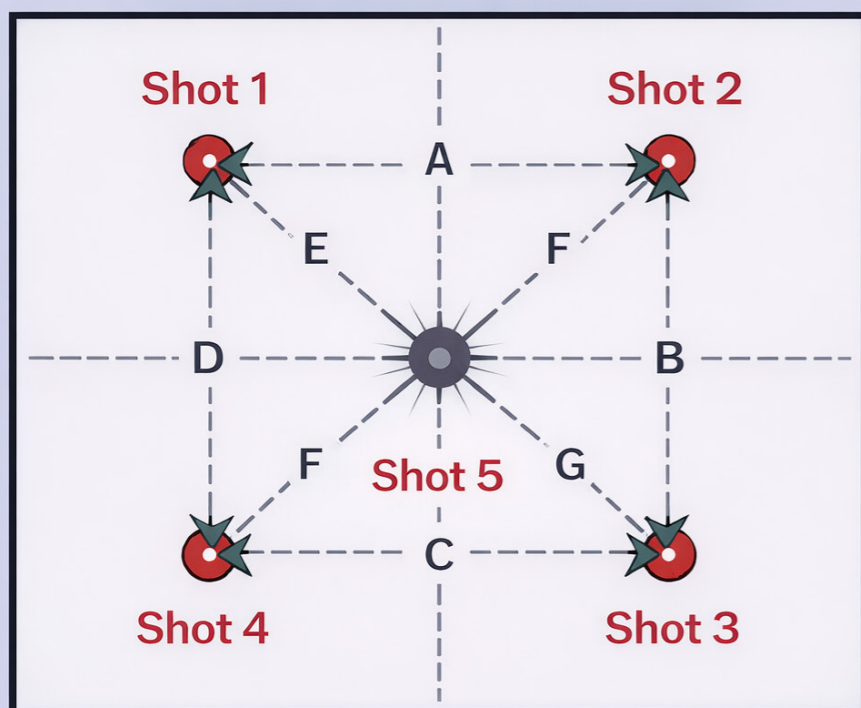
Resistance Classification for Ballistic Steel

Thanks to our experience and know-how of hybridization and production of composite and sandwich panels, we can produce fully customizable, ad-hoc components based on your project's requirements.

This system is based on an innovative concept of lamination and hybridization of multi-materials. The range includes last-generation textile and polymer hybridization on with Heavy-Duty performance to meet the requirements. Products can also be developed in collaboration with the administration to define which elements from the risk assessment to pursue, based on the requirements and can meet from Level 1 – to Level 8 or higher per request- threat level per UL 752 and equivalent standards.

***Products above Level 8 can be separately studied per request.**

UL752 5-Shot Pattern



And Ballistic FiberGlass Panels

Class Threat Level	Type of Weapon	Calibre	Ammunition	No of Shots	Min FPS	Max FPS	Test Range (m)
1	Hand Gun	9mm x 19	FMJ	3	1175	1293	4.6
2	Hand Gun	.357 Magnum	JSP	3	1250	1375	4.6
3	Hand Gun	.44 Magnum	LSW GC	3	1350	1485	4.6
4	30.06 Rifle	30.06	LSP	1	2540	2794	4.6
5	7.62 Rifle	7.62 x 51	LC/FMJ Military Ball	1	2750	3025	4.6
6	9 mm Uzi	9mm x 19	FMJ LC	5	1400	1540	4.6
7	5.56 Rifle	5.56 x 45	FMJ LC	5	3080	3383	4.6
8	7.62 Rifle	7.62 x 51	LC/FMJ Military Ball	5	2750	3025	4.6
9	30.06 Rifle	30.06	SC FMJ (APM2)	1	2715	2987	4.6
10	.50 Rifle	M2	FMJ/CJ Military Ball	1	2810	3091	4.6
Shotgun	12 Guage	Rifled Slug	Lead 28g	3	1585	1744	4.6
Shotgun	Shot Gun	00 buckshot	Lead 42g	3	1200	1320	4.6

Materials

The table outlines the protection levels and certification references of ballistic protection levels in addition to UL752 that we can accommodate based on request.

Products produced with the same design concept can be made using any available thicknesses to achieve varying levels of safety.

STANAG 4569

Protection Level	Threat	Velocity (m/s)	Distance (m)	Armox 500T (mm)	Armox 600T (mm)
Level 1	45×5.56 SS109	20± 900	30	–	6.0
	45×5.56 M193	20± 937	30	9	–
	51×7.62 Ball	20± 833	30	–	–
Level 2	39×7.62 API BZ	20± 695	30	12	8.5
Level 3	54×7.62R B32 API	20± 854	30	16	15
	51×7.62 AP (WC)	20± 930	30	22	21

EN 1522

Protection Level	Threat	Velocity (m/s)	Distance (m)	Armox 500T (mm)	Armox 600T (mm)
FB+4	39×7.62 M43	10± 700	10	4	–
FB6	45×5.56 SS109	10± 950	10	6.5	5.0
	51×7.62 NATO Ball	10± 830	10	–	–
FB7	51×7.62 NATO AP	10± 820	10	14.5	11.0

NIJ

Protection Level	Threat	Velocity (m/s)	Distance (m)	Armox 500T (mm)	Armox 600T (mm)
III	51×7.62 NATO Ball	9± 838	15	6.5	5.0
IV	.30 M2 AP	–	15	14	11.0

VPAM PM 2007 / Preferred Civilian Standard

Protection Level	Threat	Velocity (m/s)	Distance (m)	Armox 500T (mm)	Armox 600T (mm)
PM6	39×7.62 M43	10± 720	10	4	–
PM7	45×5.56 SS109	10± 950	10	6.5	5.0
	51×7.62 NATO Ball	10± 830	10	–	–
PM9	51×7.62 NATO AP	10± 820	10	14.5	11.0

High Civil And Military Infrastructure (Ballistic/EMI Shielded)

At ABET HTS, as lightweight sandwich and composite panel producers, we offer a diverse range of lightweight panels, with various finishes and featuring different cores, ensuring tailored solutions for your specific requirements.

Moreover, we offer system engineering and design services and supply all structural materials for the building envelope. Our expertise covers the entire process, and we focus on collaborative problem-solving, working closely with your team throughout the project's lifecycle.



Customized Product Development:

We offer tailored solutions to meet unique project requirements, leveraging our expertise in lightweight product design and fabrication.

Prototype Development:

We offer prototype development services to validate design concepts and assess product performance before full-scale production.

Value Engineering:

Our value engineering approach optimizes product design and manufacturing processes to maximize cost-efficiency and performance.

Technical Consultation:

Our team provides expert guidance and support throughout the project lifecycle, offering insights into material selection, structural design, and manufacturing processes.

Panel Optimization:

Utilizing advanced optimization software and machinery, we optimize panel sizes to minimize material waste and enhance cost-effectiveness, ensuring efficient production processes.

Panel Layout Design:

Our team offers panel layout design services, optimizing panel placement and arrangement to maximize space utilization and efficiency in various applications.

Executive Project Design Services:

We offer executive project design services, providing detailed design documentation and technical drawings to facilitate project execution and ensure adherence to specifications.

Panel Processing:

We provide comprehensive panel processing services, including cutting, drilling, milling, edge working, folding, bending, and semi-assembly, tailored to meet project specifications and requirements.

Civil And Military Infrastructure

Self-Standing Installation Options

Standard Floor-Mounted Installation



Modular Free-Standing Installation



Partition Wall Installation



Selected Projects Highlights

Ballistic Containment Systems For Training

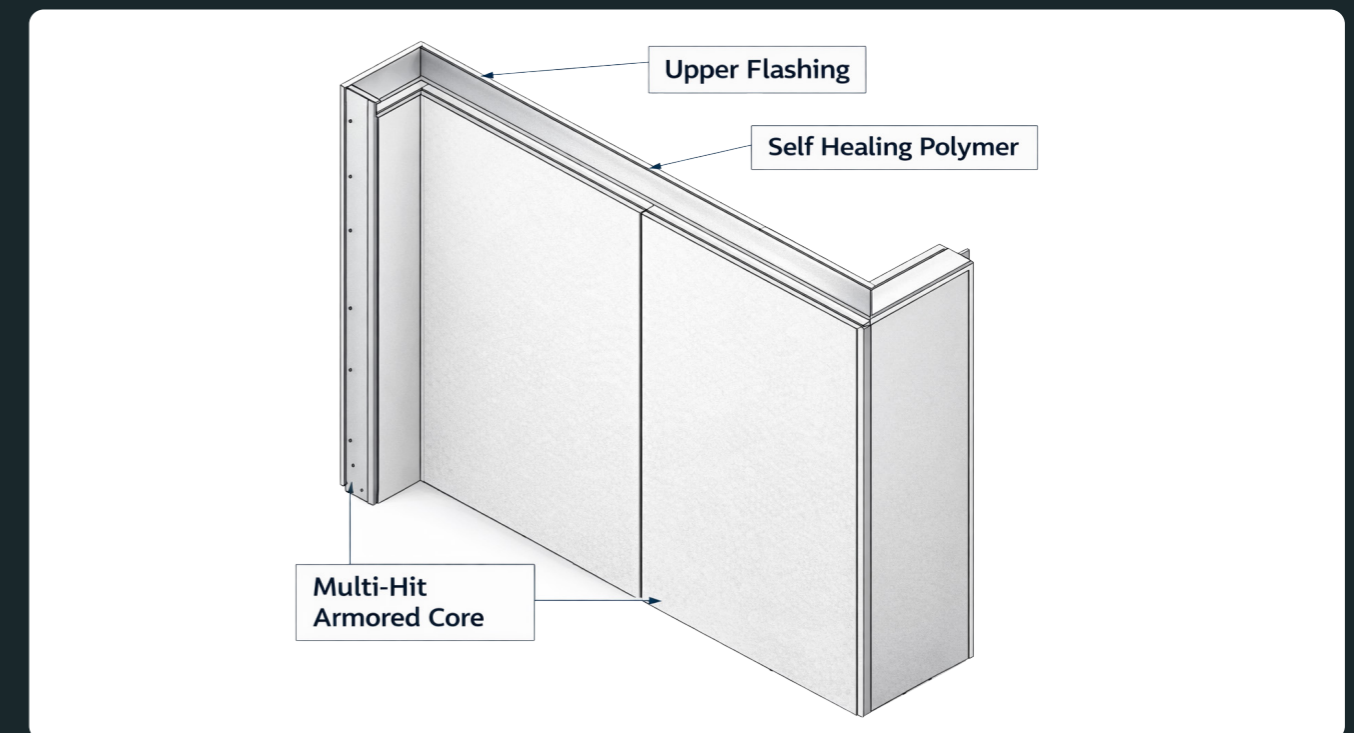
Tested with 7.62 NATO Ball and 5.56 caliber bullets. The test was carried out focusing on the corner area considered the most critical point.

The main features of the armored wall core are:

- Modular components
- Fully MECHANICAL connections between components
- Modular components can be custom-made to create to fit any environment.

No welding ensures key benefits:

- Maintains the hardness of all elements, avoiding weak points caused by heat during welding on ballistic steel.
- Ensures precise installation, as panels are custom-designed for the application area and connect mechanically.



Selected Projects Highlights

UGV – Our Unmanned Ground Vehicle

UNMANNED
LOGISTIC
INTEGRATED
SOUNDNESS
SYSTEM
E-TECH



Selected Projects Highlights

Barrier

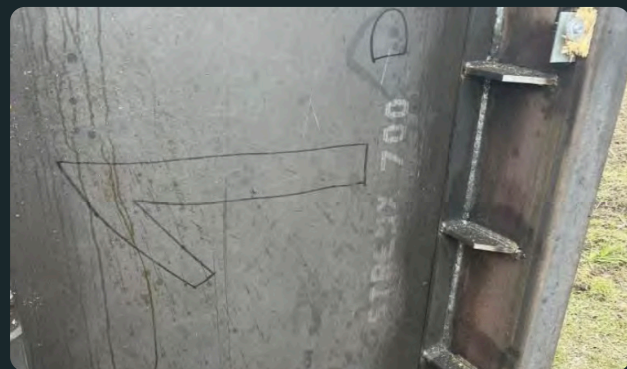
sistema di pannellatura modulare
di protezione STANAG 2280 Livello C5.

HIGH
RESISTANCE
BARRIER



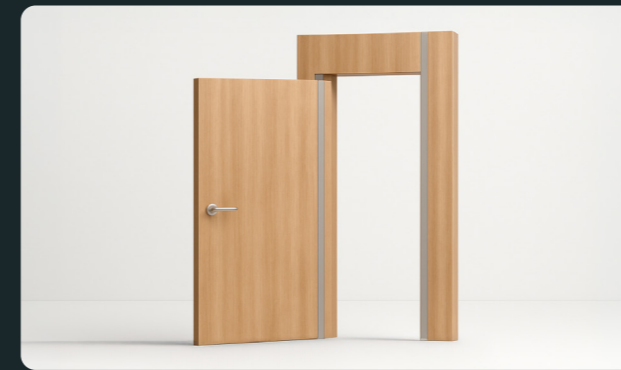
Selected Projects Highlights

Stanag 2280 - Modular Ballistic Containment System and Panel Test



Selected Projects Highlights

Ballistic Containment Systems For Schools



Leading innovation with composite technologies



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