

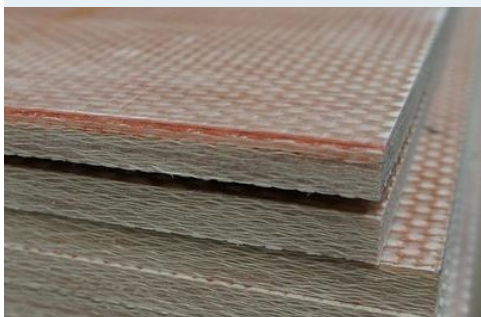
## Ballistic Protection Panels

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CEASEFIRE® ballistic panels for protection against bullet and fragmentation penetration are Certified to UL 752 Protection Level 8, the “highest certifiable” UL level of protection. Providing defense against projectiles weighing up to 150 grains (9.7 grams) and accelerated to 3025 FPS, these panels are only 1 <sup>7</sup>/<sub>16</sub> inch (36.5mm) thick and weigh less than 16 pounds per square foot (16 lbs/0.09 m<sup>2</sup>)

### MULTIPLE STRIKE PROTECTION

Our panels are capable of absorbing multiple penetrations without piercing through the panel.



CEASEFIRE® is a registered trademark of Lava-Liner, Ltd. a manufacturer of fire proof, water proof and antimicrobial polymers for more than 25 years. Their materials have been used to coat bridges, chemical containment and protect building structures, vehicles and marine vessels world wide.

CEASEFIRE's polymers are an integral of these woven ballistic fiber panels and provide permanent adhesion to metal, concrete and wood substrates.

Panels can be custom cut or designed to meet specifications of our customers.

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## BALLISTIC PROTECTION

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### PERSONNEL SECURITY

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### HARD SHELL ARMOR PANELS

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*Layered Security is Defense Preservation*



## Only the Best

With the goal of only delivering the best protection products to its customers, CEASEFIRE® will only provide threat level protection products that meet or exceed the highest level for testing available against exposure to small arms and flame.

Testing parameters and ratings for its panels are continuously monitored and upgraded as necessary. Ongoing Research and Development insure that the products delivered meet exacting standards for protection against fire and projectiles.

CEASEFIRE® personnel will personally assist in design and provide installation guidance and assistance at every level.

Primary panels sizes can be cut to any 2 D requirement per customer requirements.

## Testing and Ratings

### PANELS

- ⇒ 1. ASTM E119-98 Standard Test for One-Hour Fire-Rating of Building Construction and Materials
- ⇒ ASTM F1233-98 Standard Test Method for Forced Entry Testing of Materials/Assemblies, body passage requirement, Class IV
- ⇒ ASTM E 90-97 Standard Method for Laboratory Measurement of Airborne Sound
- ⇒ Transmission Loss of Building Partitions, STC 35
- ⇒ ASTM E 413-87 Classification for Sound Insulation Rating
- ⇒ Underwriters Laboratories:
- ⇒ UL 752 Specifications and Ammunition, 11th Edition, Standard for Bullet Resisting Equipment published September 9, 2005, revised December

### SEALANT AND ADHESIVE

- ⇒ ASTM E 108-11, Standard Test Methods for Fire Tests of Roof Coverings: Class A Spread of Flame Testing

## Protective Composites

Each component in the CEASEFIRE® panel is critical in stopping a ballistic threat.

The composite laminate consists of ballistic grade fiber compressed under high temperature and compression set in reinforced thermoset resin. This construction is designed to defeat a projectile through a process of energy absorption through controlled delamination and energy dissipation.

The fiber reinforcement transfers the energy of the bullet across the width of the panel. In addition, the resin is designed to separate into individual plies through a process of controlled delamination to eventually absorb all the energy and stop the bullet within the laminate.

Once the plies have begun to delaminate, additional shots become progressively easier to defeat because the energy is more readily absorbed by the laminate.

In contrast to metal barriers, the fiber laminate is designed to prevent ricochet of the projectile as well as spalling on the non-threat side of the panel.

