

Aircraft Armor Systems

In 1975, we introduced the first successful military crashworthy crew seat in the UH-60 Black Hawk aircraft. Since that time we have continued to distinguish ourselves by introducing leading-edge technologies in crashworthy seating, air bag systems, safety system electronics, and armor.

BAE Systems offers a wide range of unique lightweight ceramic, transparent, and soft aircraft armor solutions for fixed-wing and rotary-wing aircraft that no other company can provide.

Our monolithic ceramic armor technology was first applied to SAPI body armor in 1998. Since that time, we have used monolithic ceramic technology to develop the new UH-60M seat bucket, as well as other next-generation seating systems currently in development.

Standard Features

- Lightest weight and lowest areal density (weight per unit area) in the industry
- Complex curvatures, as well as flat components
- Minimum amount of material used to cover required area
- Raised edges and joints are eliminated
- Parts count and costs are minimized
- Wide range of options in ceramic and backing material

The Advantage is Clear



Heritage Faceted Technology
Complex. Heavy. Expensive.

16
parts



True Monolithic Technology
Simple. Lightweight. Economical.

2
parts

KEY FEATURES

Monolithic armor technology accommodates curvatures and saves weight

Variety of armor systems available to meet specific requirements

Computer-Aided Design enables optimized fit for different platforms

Lightest weight ceramic armor technology

Unmatched transparent armor technology



Cockpit seat with monolithic bucket

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Unmatched Transparent Armor Technology

BAE Systems has developed, patented, and is producing a new liquid-castable transparent polyurethane, Cleargard®, which provides superior ballistic performance compared to conventional transparent polymers like acrylic and polycarbonate. Cleargard's advantages are characterized by:

- Lower density than acrylic or polycarbonate
- High impact resistance
- Excellent optical clarity
- High ductility
- High thermal and chemical resistance
- Superior abrasion resistance compared to acrylic and polycarbonate
- Compatible with a variety of dye packages and coatings
- Liquid castable to complex shapes or sheet form

Comprehensive Development Capabilities and High Volume Manufacturing

With onsite modeling, analysis, testing, and Research and Development capabilities, we can provide complete, customer-tailored armor solutions for seats and structural components, as well as fuselage and floor armor, from concept to production.

- Over 30 years of experience developing and manufacturing lightweight composite armor protection systems
- Armor and composites production areas encompass more than 100,000 ft²
- Work is completed by a team of skilled technicians trained in composite fabrication techniques and specific product requirements
- Armor pre-fit and bonding operations
- In-house ballistic test laboratory

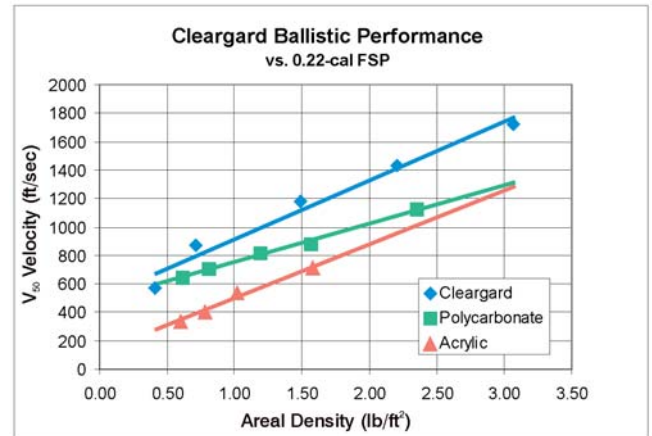
Cleargard® is a registered trademark of BAE Systems

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C-130 look down window



Floor armor

