



## DEFENSE

### SUPPORTING EVERY BRANCH OF THE MILITARY

Defense manufacturers choose General Plastics for our superior quality material, manufacturing capabilities, and material certifications. For over 80 years, General Plastics has engineered, machined and fabricated rigid foam and flexible foam materials to satisfy the physical property, flammability, and other demanding specifications of the defense industry. We have proudly worked with every branch of the military, satisfying a wide array of applications.

Our flexible, open-cell polyurethane foams are formulated to absorb large amounts of impact energy at controlled rates while cushioning payloads from high G-stress levels. They have been used extensively in vibration damping, shock isolation systems, protecting missiles in underground silos and submarine launch tubes. The Minuteman, Peacekeeper and Trident programs have all relied on LAST-A-FOAM® products.

Other military applications include protecting sensitive payloads such as munitions, electronics, and explosives. Depending on the requirements and design, these flame-retardant, impact-absorbing, lightweight structures can hold their payloads snugly or simply keep them separated from each other within their crates. From high-density, rigid foam for heavy or extremely metallic structures to low-density flexible foams used for munitions and electronics, General Plastics can custom formulate your dunnage packages.

**CURBELL**  
PLASTICS

1-888-CURBELL

[www.curbellplastics.com](http://www.curbellplastics.com)

Curbell Plastics is a proud supplier of General Plastics materials.

### FEATURES & BENEFITS

- Impact limiting, shock absorbing
- Lightweight, strong, and durable
- Flame-retardant, self-extinguishing materials
- Meets stringent defense industry specifications
- Wide range of products for various density and strength requirements
- Moldable and easily machinable
- Customizable formulas
- ITAR compliant facility
- Buoyant
- Insulating
- Rigid foams do not absorb water and do not warp
- Bonds easily, compatible with many types of adhesives

### MILITARY SPECIFICATIONS

MIL-PRF-26514, Rev G, Type 1, Class 1  
MIL-PRF-26514, Rev G, Type 1, Class 2, Grade (if specified, density specified separately)  
MIL-F-83671, Class 1, Category 1  
MIL-C-83400, Type 1 (FR-3703), Type 2 (FR-3704)  
MIL-C-8087, Type 1, Class 1

### CERTIFICATIONS & QUALITY SYSTEMS

ISO 9001:2015/AS9100D  
NQA-1  
Boeing Company D6-82473  
ITAR-Compliant

**LAST-A-FOAM® FR-3700 Performance Core Series** This flame-retardant, rigid, closed-cell polyurethane foam is available in densities ranging from 3 to 40 pounds per cubic foot. It exhibits a high strength-to-weight ratio and provides exceptional protection for hazardous cargo and payloads as an impact and fire-insulation liner in transport or packaging containers.

**LAST-A-FOAM® FR-3800 FST Aerospace Foam Series** This lightweight foam core, satisfies fire, smoke and toxicity (FST) requirements for aerospace cabin interiors. It complies with the Ohio State University (OSU) 65/65 heat release standard, FAA flame and smoke regulations and aircraft manufacturer toxicity requirements for interiors. It's also used as insulation panels for ground based missile systems and provides protection to the system's cargo.

**LAST-A-FOAM® FR-4300 Thermoformable Board Series** This foam is ideal for composite panel cores and other structures where compound-curved surfaces or other details can be made with low-cost heat-forming methods.

## Applications

- Nozzle closures/weather seals on rocket boosters
- Explosives packaging/dunnage
- Engineered bomblet holders
- Explosive charge encapsulant
- Insulation panels for mobile ground-based missile system
- Easily machinable subsea buoyancy products
- Reactive tank armor
- Ballistic panels for vests and helicopter seat bottoms
- Shock isolation dampeners for underground missile silos
- Core materials for military shelters, containers, solar panels, etc.
- Radomes
- Aircraft fuel tank support/cushioning
- Steel ballast closures/vibration damping for submarine applications

**LAST-A-FOAM® EF-4000 Energy Absorption Low-Density Series** This low density foam is formulated to absorb significant energy while protecting payloads, such as missiles in underground silos and nuclear submarine launch tubes. These products have been used extensively in the Polaris and Trident programs for padding on the closures of missile nose cones. They have also served as packaging and support pads for the Air Launch Cruise Missile (ALCM) and been used in the Minuteman and Peacekeeper programs.

**LAST-A-FOAM® TF-5070 Energy Absorption, Fire Retardant Series** This extremely durable, long-lasting, flame-retardant foam series is formulated to absorb significant energy while protecting payloads. Applications include "spring-damper" for submarine launch tubes, shock isolation system in construction, impact mitigating pad for shipping containers and vibration damper pads for mechanical equipment.

**LAST-A-FOAM® TF-6070 Energy Absorption, High Density Series** This series offers excellent shock isolation of heavy object with minimum creep while under continuous static stress loads that range from 0.2 to 10.0 psi. It is quite firm in relation to its density and features relatively flat static and dynamic-stress-versus-deflection curves.



*Image of GP's foam used as nozzle closure that protects a rocket's motor from environmental factors until ignition. Closure then breaks apart when motors are ignited.*