Innovative Solutions for Aerospace and Defense
Innovative Solutions for Environmental Extremes

As today’s aircraft manufacturers expand traditional boundaries of performance, the issues of thermal management, fire protection and weight reduction become ever more critical.

Engineered Materials leads the industry in developing innovative solutions to these challenges for the world’s top aerospace companies. We specialize in custom-engineered solutions ranging from clamping devices, fasteners and sealing systems to fire barriers, thermal insulation and critical ducting systems.

Our commitment to research and development ensures a continuing flow of next-generation technical and design solutions.

Precision Silicone Seals

A world-leading producer of precision silicone seals for aircraft, Engineered Materials is also the largest custom-engineered elastomer manufacturer in the western United States and one of the largest in the world.

Recognized by major OEMs as a source of breakthrough elastomer technology, our R&D lab’s full staff of chemists works to develop compounds that are lighter in weight, designed to withstand higher temperatures and offer improved chemical resistance.

Our engineering staff works closely with customers to develop custom solutions to complex design challenges. Our product capabilities include:

- Aerodynamic seals
- Rubber extrusions
- Elastomeric sheet material
- Fire barrier seals
- Inflatable seals
- Fabricated ducts/bellows
- Aircraft interior seals
- Gaskets/bumpers/grommets
- APU seals
- Low observable seals

Fastblock® Thermal Fire Barrier Insulation

Our Fastblock® thermal fire barrier insulation outperforms all other fire barrier and insulation materials in its class. Fastblock has several forms:
Lightweight Molded Clamps and Wire Management Devices

Engineered Materials has more than 50 years of experience in supplying both stock and custom-molded plastic clamps, grommets and wiring devices for aircraft.

Our honeycomb panel fasteners offer a unique solution for manufacturers looking to reduce weight yet not willing to sacrifice quality. These composite panel fasteners offer:

- Weight that's a fraction of traditional metal panel fasteners
- Performance that matches or beats their metal counterparts
- Corrosion resistance and heat resistance up to 350°F
- High pull-out strength due to a strong bond between their materials and potting compounds

Our Swiftbond™ series uses a disposable fixture system with pressure-sensitive adhesive for fast and easy installation of bonded-on parts such as:

- Cable-tie mounts
- Right-angle mounts
- Studs
- Standoffs

The fixture holds the component in place while the adhesive cures and is then easily removed, leaving the final product bonded to the structure with minimal labor and no drilling.

Specialty Clamping, Grommeting and Thermal Fire Barrier Insulation

As a world leader in the design and manufacture of metallic and elastomer clamping systems, grommeting and thermal fire barrier insulation, Engineered Materials offers:

- Loop and saddle clamps
- Flip-Loc® clamps
- Line blocks
- Grommets
- Conductive cushion clamps

Our Universal Grommet™ product line offers a simple and lightweight method of passing wiring through bulkheads. Custom-designed elastomer grommets can be installed and maintained without tools, fasteners or sealants in a variety of tube, cable and wire pass-through applications:

- Wing fuel tank ribs
- Nacelle fire walls
- Fuselage stringers
- Engine core exits

Our Fastblock series offers a range of products for a variety of applications:

- Fastblock 100 Series — a ready-to-use solvent-based firewall sealant, adhesive and repair compound that can be used to seal gaps and repair thermal blankets that have been torn or damaged.
- Fastblock 300 Series — a low-density fire and thermal barrier coating and fabrication molding compound.
- Fastblock 800 Series — an ultra-low density, sprayable, water-based fluorocarbon coating that provides an effective chemical barrier.
- Fastblock 900 Series — a sprayable and brushable water-based fluorocarbon coating that provides an effective chemical barrier.
Precision Processing of Metals and Composites for Aerospace

Engineered Materials has over 50 years of experience in the treatment of aerospace metals and composites, offering a wide range of complementary processes with a broad suite of OEM approvals.

One-Stop Complex Processing
A full range of processing services in one location simplifies your logistics and decreases overall lead times. Popular process capabilities include:

- Mechanical processes — Shotpeen, polish and abrasive blast
- Aluminum processing — Multiple anodize chemistries, chemical conversion coating and hard anodize
- Electrolytic plating — Chrome, titanium cadmium, cadmium, zinc-nickel and others
- Coatings and paints — Primers, fuel tank coatings, topcoats, dry lubricants and intumescent coatings
- Non-destructive testing — Fluorescent penetrant, magnetic particle and nital etch
- Other — Zinc spray (Airbus), magnesium processing and passivation

“Green” Processing
Engineered Materials received the Washington State Governor’s Award for Environmental Stewardship, as well as numerous other environmental awards. We offer environmentally friendly processes such as:

- Zinc-nickel plating — Primary cadmium replacement, approved by both Airbus and Boeing
- Zinc thermal spray — Cadmium replacement for certain applications
- Boric-sulfuric anodize for aluminum
- Citric passivation

Commitment to the Customer
We process a high volume of orders, ranging from one to 400,000 parts, for hundreds of customers each year with superior customer service and communication. We also offer the services of our licensed FAA Repair Station to restore your parts to full service. Our 20-year focus on Lean Manufacturing has increased our speed and capacity, helping us to ensure precise, rapid attention to your parts and your needs.

Accreditations

Kirkhill, TA and NMC

Kirkhill
- FAA DMIR 1
- Certified GE Composite Materials Lab
- FAA PMA

TA
- NADCAP AS7200 (Sealants)
- NADCAP AC7102 (Heat Treat)
- FAA TSQ
- FAA DMIR (2)
- AWS B17.1 (Welding)
- TS 147, TS 170
- ISO 14001
- NADCAP Chemical Processing
- FAA PMA

NMC
- QPL-AS23190
- BAC 5321
- Torlon PAI Processor

Darchem
Stillington & Gloucester
- BS EN ISO 9001:2008
- BS EN ISO 14001:2004
- EASA - AD/1896/05
- EASA - Part 21 (G)
- EASA - Part 145
- AS9100 Rev C
- OHSAS 18001-2007

Stillington
- NADCAP (NDT)
- NADCAP (Welding)
- NADCAP (Chem Pri)
- NADCAP (NCM)

Gloucester
- NADCAP (Welding)
- NADCAP (NCM)

Hytek Finishes
- AS9100 Rev C
- ISO9001-2008
- NADCAP AC7108 - Chemical Processing
- NADCAP AC7114 - Non-Destructive Testing
- NADCAP AC7117 - Surface Enhancement (Shot Peen)
- FAA/EASA Repair Station

Esterline Engineered Materials
Lightweight Thermal Metallic and Combination Insulation Systems, Fire Protection Products and High-Temperature Metallic Fabrications

Engineered Materials offers a wealth of experience in the design and manufacture of lightweight insulation systems, fire protection products and high-temperature metallic and composite fabrications for commercial and military aircraft. While traditional metallic products offer reliable performance for challenging high-temperature environments, composites have the additional advantage of reduced weight and thickness as well as increased flexibility.

Insulation
Engineered Materials is a world leader in the design and manufacture of specialty lightweight engineered thermal insulation systems for aerospace applications. Typical applications include:

- Thrust reverser and strut insulation blankets (including direct shipment authority for B737NG spares/replacements)
- Pipe insulation
- Duct insulation
- Brake insulation

Aerostructures
Our expertise is unrivalled in the design and manufacture of complex “hard metal” assemblies. Engineered Materials is a specialist in the processing, manipulation, assembly and joining of titanium, high-temperature alloys and stainless steels for the aerospace industry. Typical products include:

- Exhaust systems
- Duct systems and assemblies
- Aerodynamic fairings
- Heat shields
- Piccolo de-icing tubes and ducts
- Structural assemblies
- Thermally insulated and/or acoustically attenuated assemblies

Honeycomb Systems
We specialize in the design, manufacture and installation of welded honeycomb structures for the aerospace industry. Our products include:

- Wind tunnel flow straighteners
- Intake turbulence control screens

Naval
We supply structural and insulation products to naval ships and submarines:

- Exhaust uptakes and downtakes
- Fire barriers
- Infrared suppression systems
- Insulation around submarine reactors
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300 East Cypress Street
Brea, CA 92821
(714) 529-4901
Precision Sealing Systems...

NMC Aerospace
2755 Thompson Creek Road
Pomona, CA 91767
(909) 451-2290
Wire Management, Honeycomb
Panel Fasteners and Swiftbond™...

TA Aerospace
28065 Franklin Parkway
Valencia, CA 91355
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Grommets and Fastblock®...

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Esterline Engineered Materials is part of Esterline Technologies Corporation, a specialized manufacturing company principally serving aerospace and defense markets. Headquartered in Bellevue, WA and listed on the New York Stock Exchange, Esterline trades under the symbol ESL.

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