

# **AIRCRAFT SEALS**

Design, Development and Manufacturing

Made from Silicone and Other Elastomers, Conductive and R.A.M., Fabric and Other Reinforcing Materials



- Door Seals
- Window Seals
- Hatch Seals
- Gap Seals
- Engine Seals
- Fire Barrier
- Aerodynamic Seals



Certified ISO9000/AS9100

800-576-SEAL www.SEALSCIENCE.com



#### **About Us**

**Seal Science, Inc.** (SSI) offers a complete capability for **Aircraft Structural Sealing**. SSI emphasis has always been to provide its customers with the best possible solution at the most competitive price, offering tremendous value, quality and reliability. With excellent material science, design engineering, application experience, and precision manufacturing techniques at its core, SSI offers engineers a complete resource for providing the **Formula for Success.** 

For more than 20 years, Seal Science is taking on new challenges by building and expanding its capability and capacity to solve the industries most demanding applications. SSI is ISO 9001 and AS9100 certified and can offer its customers a confident engineering and manufacturing partner for Seals, Gaskets and Vacuum Components

This brochure focuses on Aircraft Seals that are used on airframes, wings, rudders doors, windows, and access panels for providing aerodynamic, air flow, electronic wave, vibration control and moisture sealing in military, commercial, business jets, light planes and other airborne crafts such as missiles, ordnance, drones, decoys, satellites, etc.

#### **Materials**

SSI offers a complete capability for seals and gaskets made from:

- Silicone and Silicon /Fabric compositions
- · Organic elastomers and fabric reinforced compositions
- Radar-Absorbing Materials (R.A.M.)
- Conductive elastomers and reinforced conductive fabric
- · Metallic /Elastomer bonding
- Plastic / Elastomer / Metallic bonding

#### Fabric and Composite Reinforcements:

Many types of reinforcements are available to combine with base materials to add to the durability, endurance and electronic properties of the base.



**Fiberglass** 

Kevlar

PBI

Nextel

Nomex

Wire mesh

#### Conductive Elastomers:

These are generally filled silicone products. Fillers include; silver and silver-plated material, carbon fiber and other materials used for specialty applications for:

#### RAM, ESD, EMI, RFI.

SSI offers materials with low magnetic signatures and varying degrees of hardness and resistance.







### **Typical Applications**

Doors
Windows
Hatches
Wing Panels
Aerodynamic Surfaces

Military Aircraft Commercial Aircraft

Drones Airframe Missiles Light planes Satellites Interiors



# Design Engineering and Development

SSI engineers will work closely with you to define the parameters affecting performance, longevity and compatibility. For collaborative design efforts we use Pro-E and SolidWorks to assist us in model making, rapid prototyping and design. Exotic material formulation and special compositions include multi-component / odd-shaped configurations resulting in innovative solutions that solve "big" problems.

## **Manufacturing Technologies**

- Rubber to Metal Bonding
- Extruding
- Compression molding
- Injection molding
- · Liquid injection molding
- · Plastic and metal machining
- · Plastic injection molding
- · Mold and tool-making
- Stamping
- Die-cutting
- Precision grinding

#### **Other Products**

- · Static and Dynamic Seals
- Diaphragms
- · O-rings and back-up rings
- Urethane seals and wear rings
- Vacuum cups
- Vacuum generators
- Molded and bonded rubber
- Liquid silicone molding
- Spring-energized PTFE seals
- Machined Performance Plastics
- Injection molded Plastics
- · Gaskets and die-cuts



