



SEAL SCIENCE, INC.

Design Engineering & Precision Manufacturing



RUBBER, PTFE, PLASTIC, SEALS & COMPONENTS

- Molded
- Machined
- Injection Molded
- Extruded
- Stamped
- Bonded
- Ground

**Registered
ISO9001/AS9100**

Solutions for Critical Sealing Environments

- | | | |
|-----------------------|------------------|-------------------------|
| • Temperature | • High Pressures | • Precision Tolerances |
| • Wear/Friction | • Vacuum | • Conductivity |
| • Chemical Resistance | • Permeability | • EMI/RFI/ESD Shielding |
| • Purity | • Bonding | • Leakage |

800-576-SEAL
www.SEALSCIENCE.com



SEAL SCIENCE, INC.

AEROSPACE • DEFENSE • MEDICAL • AUTOMOTIVE

MOLDED AND BONDED RUBBER



- Experts with Close Tolerances
- Widest Material selection
- CAD, CNC, EDM Mold Making
- Metal/Plastic/Teflon^{®(1)} Substrates
- Injection, Transfer, and Compression Molding
- Material Testing
- Standard and Custom Compounds

CONDUCTIVE ELASTOMERS EMI/RFI



- MIL-DTL-83528
- EMI/RFI/ESD Shielding
- 0.2 Ohm-Cm to 40,000,000 Ohm-Cm
- Test Verified Conductivity and Resistivity
- Wide Temperature Range
- Material Experts
- Molded and/or Die Cut Shapes

CUSTOM SEALS



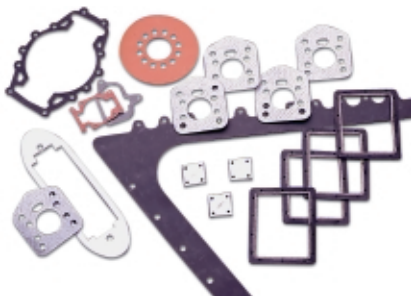
- Micro Sizes to Very Large
- Customer or Seal Science Design
- Multiple Materials Including Metals
- Co-Molding
- Complete Assemblies

AIRCRAFT SEALS



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

GASKETS AND DIE CUTS



- Rubber, Plastics, Foams
- Small to Large Sizes
- ESD/RFI Composites
- High Speed Machines
- Rapid Delivery
- Design for Gasket Factor Performance
- Adhesive Backing

PerFlex™ PERFLUOROELASTOMERS



- Custom Designs
- 600°F+ Applications
- Extreme Purity Materials
- Low Compression-Set
- Resilient/Low Permeability
- Maximum Chemical Resistance
- Standard and Custom Compounding
- Very Competitive

O-RINGS AND BACKUP RINGS



- AS568, Metric, JIS
- All Materials and MIL Specifications
- Custom Compounds
- Special Sizes
- Perfluoroelastomers
- Rapid Custom Tooling
- Teflon^{®(1)}, Rubber, Urethane, Hytrel^{®(1)} Backup Rings

LIQUID SILICONE MOLDING



- Medical/Biomedical Products
- Cleanroom Production
- FDA Grade Material
- USP Class 6
- Flashless Molding
- Economical for High Volumes



SEAL SCIENCE, INC.

SEMI-CONDUCTOR & INDUSTRIAL APPLICATIONS

PTFE SEALS



- Spring Seals
- Rod and Piston Seals
- Piston Rings
- Wipers
- Rotary Seals
- Special Designs
- Friction Limiting and Heat Resistant
- Standard and Custom Materials
- Mil Spec and Industrial Sizes

VACUUM CUPS / PNEUMATICS



- Over 100 Compounds
- Large Inventory
- Standard Sizes 2mm to 170mm
- Specials to 500mm
- Conductive or Non-Staining
- High and Low Temperatures
- Expert Assistance
- Custom Designs

MOLDED AND MACHINED PLASTICS/TEFLON®(1)



- Temperatures -300°F to 550°F
- Close Tolerances
- Polyimides, PEEK, and others
- Molded and Extruded Teflon®(1) Materials
- Screw Machining
- CNC Machining
- Injection Molded PFA and FEP

DIAPHRAGMS



- Elastomer and Elastomer/Fabric
- Bellows or Flat
- Knowledgeable Assistance
- Severe Environments
- Flexible for Low Resistance
- Bonding/Assembly to Metals and Plastics

INJECTION MOLDED PLASTICS



- 20-300 Ton Capabilities
- Insert Molding
- Engineered Materials
- Hytrel®(1), Santoprene®(2), and Kraton®(3) Included
- Rapid Prototyping
- Nylon, Delrin®(1), ABS
- Rynite, etc.

CLOSE TOLERANCE GRINDING



- Tolerances to .001
- Bonding Experts
- Hard/Soft Materials
- Excellent Finish
- Specialized Tooling
- Substrates and Inserts Machined In House
- Needle Valve/Valve Applications

PolyKing™ SEALS AND WEAR RINGS



- Urethane Seals
- Wear Rings
- Abrasion Resistant
- Standard U-Cups
- Fatigue Resistant
- Rubber Compound Seals
- Design and Selection Assistance
- Custom Design Specialists

MOLDED URETHANES



- Standard Seals
- Custom Shapes
- Low Wear Compounds
- Injection Molded
- Custom Designs
- Bonding
- Rapid Tooling with Inexpensive Mold Inserts

ENGINEERED MATERIALS

ENGINEERED PLASTICS

ABS
 Acetal, Delrin®⁽¹⁾
 Fluoroplastics'
 ETFE, Tefzel®⁽¹⁾, ECTFE,
 Halar®⁽⁵⁾, CTFE,
 PVDF, KYNAR®⁽⁴⁾
 FEP, PFA
 Nylon, Moly-Filled
 Polycarbonate
 Polyetheretherketone, PEEK
 Polyetherketone, PEK
 Polyethylene, HDPE, UHMW
 Polyimides, Vespel®⁽¹⁾
 Polyolefin
 Polyphenylene Oxide, PPO
 Polyphenylene Sulfide, PPS,
 Ryton®⁽⁹⁾
 Polypropylene
 Polystyrene
 Polyvinyl Chloride, PVC
 PTFE, glass, moly, bronze,
 mineral, and Others

RUBBERS (ELASTOMERS)

Aflas
 Butyl
 Chloroprene
 Conductive Rubbers, Verified
 Resistivity
 Ethylene Propylene, EPDM
 Fluorocarbon
 Fluoroelastomers, Viton®⁽¹⁾
 Fluorosilicones
 Isoprene
 Nitriles, Lubricated and High
 Strength
 PerFlex™⁽⁸⁾ Perfluoroelastomers
 Silicones

FABRICS

Glass
 Kevlar®⁽¹⁾
 Nomex®⁽¹⁾
 Nylon
 PBI
 Polyester

THERMOPLASTIC ELASTOMERS. TPE'S AND TPR'S

Ethylene Propylene
 Hytrel®⁽¹⁾
 Polyester
 Polyetheresters
 Polyolefins
 Santoprene®⁽²⁾
 Silicones
 Styrenes
 Urethanes, Polyurethanes

METALS

Alloy Steels
 Aluminum
 Bronzes and Copper
 Hastalloy
 Magnesium Castings
 Specialty Steels, Elgiloy®⁽⁷⁾
 Stainless Steels
 Titanium

NOTES:

1. Registered Trademark of DuPont
2. Registered Trademark of Monsanto
3. Registered Trademark of Shell

4. Registered Trademark of Atochem
5. Registered Trademark of Ausimont
6. Registered Trademark of 3M Co.

7. Registered Trademark of Elgiloy Co.
8. Seal Science Trademark
9. Registered Trademark of Phillips 66 Co.

TEMPERATURE CONVERSION TABLE

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
-273	-459.4	-20	-4	80	+176.0	190	+374	360	+680	560	+1040
-260	-436	-10	+14	85	+185.0	200	+392	370	+698	570	+1058
-240	-400	0	+32	90	+194.0	204	+400	380	+716	580	+1076
-220	-364	1	+33.8	95	+203.0	210	+410	390	+734	590	+1094
-200	-328	5	+41.0			220	+428	400	+752	600	+1112
				100	+212.0						
-180	-292	10	+50.0	107	+225.0	230	+446	410	+770	610	+1130
-160	-256	15	+59.0	110	+230.0	232	+450	420	+788	620	+1148
-140	-220	20	+68.0	120	+248.0	240	+464	430	+806	630	+1166
-120	-184	23	+73.4	121	+250.0	250	+482	440	+824	640	+1184
-100	-148	25	+77.0			260	+500	450	+842	650	+1202
				130	+266.0						
-90	-130	30	+86.0	135	+275.0	270	+518	460	+860	660	+1220
-80	-112	35	+95.0	140	+284.0	280	+536	470	+878	670	+1238
-70	-94	40	+104.0	149	+300.0	290	+554	480	+896	680	+1256
-57	-70	45	+113.0	150	+302.0	300	+572	490	+914	690	+1274
-55	-67	50	+122.0			310	+590	500	+932	700	+1292
				160	+320.0						
-54	-65	55	+131.0	170	+338.0	316	+600	510	+950	710	+1310
-40	-40	60	+140.0	180	+356.0	320	+608	520	+968	720	+1328
-34	-30	65	+149.0			330	+626	530	+986	730	+1346
-30	-22	70	+158.0			340	+644	540	+1004		
-29	-20	75	+167.0			350	+662	550	+1022		

West Coast Office:

Seal Science, Inc.
 17131 Daimler St., Irvine, CA 92614-5508
 TEL: (949) 253-3130 • FAX: (949) 253-3141
 E-MAIL: info@sealscience.com

East Coast Office:

Seal Science, Inc.
 1160 Win Drive, Bethlehem, PA 18017-7059
 TEL: (610) 868-2800 • FAX: (610) 868-2144

Visit our website at www.sealscience.com