O-Rings
Custom Molded Rubber
Gaskets
Mechanical Seals
Hydraulic Seals
Machined Plastics
Radial Shaft Seals
Rubber-to-Metal Bonded
Engineered Compounds
Standard Compounds

QUALITY | VALUE | SERVICE



# **Services**

# **ENGINEERING ASSISTANCE**



Design Consultation



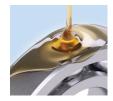
Value/Reverse Engineering



Material Selection



Computer-Aided Design



Internal and External Lubricants



On-Site Technical Support

# **OPERATIONS ASSISTANCE**



Kitting



Sub-Assembly



Clean Room



Material Traceability



PPAP Approvals



**Bin Stocking** 

# **PURCHASING ASSISTANCE**



Vendor Consolidation



Alternative Materials



Vendor-Managed Inventory



Cost Reduction



Global Sourcing



Shipment Consolidation

# **CONVERSION**



#### **Gasket Conversion**

- No Tooling or Set-up Fees
- Foam
- Rubber
- Diaphragm Materials
- Compressed Non-Asbestos
- High Performance Materials
- PSA



#### **Machined Plastics**

- PTFE Blends
- Engineered Plastics (PEEK, PPS, PA, TFM, etc.)
- Spring-energized Seals
- Shaft Seals



# Splicing / Vulcanizing

- No Tooling or Set-up Fees
- 0-Rings
- Large Diameter Seals
- Smallest Splicing Capability 6.5" ID

# **INDUSTRIES**

Aerospace Oil & Gas Medical Fluid Power General Industrial Water & Wastewater

Automotive Filtration HVAC Pool & Spa Agriculture Food & Beverage

# **Products & Materials**



Common O-Rings are readily available from Hercules OEM Group in many sizes and materials for multiple uses. We can even customize the size and material to precisely fit your application.



# **CUSTOM MOLDED RUBBER**

When the need is for non-seal type molded parts, Hercules OEM Group can help. For bumpers, caps, gaskets, bellows, handles, washers, etc., Hercules OEM Group delivers the solution.



Gaskets come in all shapes and sizes. Hercules OEM Group can supply gaskets in a variety of materials to cover all of your sealing needs. With either small sample runs or high production usage, we have you covered.



# **MECHANICAL SEALS**

High performance is a must for mechanical seals given the conditions they operate under. An extensive selection, stocked for same day shipment is also crucial to your needs. Count on us for the best quality and selection.



### **HYDRAULIC SEALS**

Rod seals, piston seals, wipers, wear guides, etc. We have the solution to meet your hydraulic needs! From standard to complex multi-faceted custom designs, we've got you covered.



#### MACHINED PLASTICS

We have options for applications requiring special seals or custom shapes, including designs for parts produced from machined plastics, like PTFE, PEEK, PA, POM, ACETAL, PAI. PPS. and more.



### **RADIAL SHAFT SEALS**

Hercules OEM Group can cover all your rotary sealing needs with our extensive range of radial seals in many different styles, sizes and materials. With years of experience in the industry, we can make recommendations for all of your rotary applications.



# **RUBBER-TO-METAL BONDED**

High pressure environments at times call for more than just rubber. Hercules OEM Group carries standard and metric rubber-to-metal seals, such as the NAS1523 mil-spec thread-seal line. We can also help engineer a custom bonded seal for your unique application.



#### **ENGINEERED COMPOUNDS**

Hercules OEM Group offers a wide variety of certified and uniquely developed compounds. UL approved, FDA compliant, NSF/ANSI Standard 51 and 61 Certified\*, WRAS certified and 3-A Sanitary O-Rings and custom molded rubber products are all available, just to name a few.

# STANDARD COMPOUNDS

AFLAS® (TFE/P, FEPM)

**OPERATING TEMPERATURE\*:** +15° to +400° F

 $\textbf{COMPOSITION:} \ \ \text{Medium density copolymer of tetrafluor oethylene}$ 

and propylene.

BUTYL RUBBER (IIR)

OPERATING TEMPERATURE\*: -65° to +250° F

**COMPOSITION:** Medium density copolymer of isobutylene and a

small amount of isoprene.

CARBOXYLATED NITRILE (XNBR)

OPERATING TEMPERATURE\*: -10° to +250° F

**COMPOSITION:** Medium density terpolymer of acrylonitrile, butadiene,

and a diene monomer containing carboxylic acid.

CHLOROPRENE RUBBER (CR, polychloroprene, Neoprene)

**OPERATING TEMPERATURE\*:** -40° to +225° F

**COMPOSITION:** Produced from the chloroprene monomer,

a combination of chlorine and butadiene.

Medium density.

ETHYLENE ACRYLIC RUBBER (AEM, Vamac®)

OPERATING TEMPERATURE\*: -30° to +300° F

COMPOSITION: Medium density copolymer of ethylene and

methyl acrylate. May also contain a small amount

of a third monomer.

ETHYLENE PROPYLENE RUBBER (EPDM, EPT, Nordel IP®, Keltan®)

**OPERATING TEMPERATURE\***: -60° to +250° F

COMPOSITION: Low density terpolymer of ethylene, propylene,

and a small amount of a diene.

FLUOROCARBON RUBBER (FKM, FPM, Viton™, Dai-El®, Tecnoflon®)

**OPERATING TEMPERATURE\*:** +15° to +400° F

**COMPOSITION:** High density copolymer of vinylidene and

hexafluoropropylene.

FLUOROSILICONE RUBBER (FVMQ, Silastic FSR®, FSE®)

**OPERATING TEMPERATURE\*:** -70° to +400° F

**COMPOSITION:** Low density fluorinated silicone rubber.

HIGHLY SATURATED NITRILE (HNBR, HSN, NBM, Therban®, Zetpol®)

**OPERATING TEMPERATURE\*:** -25° +300° F

**COMPOSITION:** Formed by hydrogenating the nitrile copolymer of

butadiene and acrylonitrile. Medium density.

NATURAL RUBBER (NR. Hevea)

**OPERATING TEMPERATURE\*:** -60° to +225° F

**COMPOSITION:** Coagulated, dried rubber derived from the latex of

the Hevea Brasiliensis tree. Low to medium density.

NITRILE RUBBER (NBR, Buna N, Paracril®, Nipol®)

**OPERATING TEMPERATURE\*:** -30° to +250° F

**COMPOSITION:** Medium density copolymer of butadiene

and acrylonitrile.

PERFLOUROELASTOMER (FFKM, Kalrez®, Chemraz®)

**OPERATING TEMPERATURE\*:** -10° to +500° F

**COMPOSITION:** High density copolymer of tetrafluoroethylene and

a perfluorinated ether.

POLYACRYLATE RUBBER (ACM, polyacrylic rubber, Hycar®)

**OPERATING TEMPERATURE\*:** -0° to +350° F

**COMPOSITION:** Medium density acrylic ester copolymer.

POLYURETHANE (AU, EU, PU, Millathane®)

**OPERATING TEMPERATURE\*:** -40° to +180° F

**COMPOSITION:** Low to medium density polyurethane diisocyanate.

PTFE (Teflon® Polyflon®)

**OPERATING TEMPERATURE\*:** -300° to +500° F

**COMPOSITION:** Fluorocarbon resin generically known as

polytetrafluoroethylene.

SILICONE RUBBER (VMQ, PSilastic HCR®, Elastosil®)

**OPERATING TEMPERATURE\*:** -65° to +400° F

**COMPOSITION:** Medium density inorganic rubber consisting primarily

of polymethylsiloxane and variations.

STYRENE-BUTADIENE RUBBER (SBR, GRS, Buna-S)

**OPERATING TEMPERATURE\*:** -50° to +225° F

**COMPOSITION:** Low density copolymer of styrene and butadiene

VITON™ ETP (Viton™ Extreme™)

**OPERATING TEMPERATURE\*:** -10° to +400° F

**COMPOSITION:** High density terpolymer of ethylene,

tetrafluoroethylene, and perfluoromethyl vinyl ether.



Viton™ is a trademark of The Chemours Company FC, LLC.

# **MATERIAL PROPERTIES CHART**

MATERIAL NAME ASTM D1418 DESIGNATION	ASTM D 2000, SAE J200 Type, Class	Relative Cost	General Temperature Range (F)	Abrasion Resistance	Acid Resistance	Base Resistance	Chemical Resistance	Cold Resistance	Dynamic Properties	Flame Resistance	Gas Impermeability	Heat Resistance	Oil Resistance	Ozone Resistance	Set Resistance	Steam Resistance	Tear Resistanceh	Tensile Strength	Water Resistance	Weather Resistance
Aflas® – FEPM	НК	High	15 to 400	G	E	E	E	P	F	E	G	E	E	E	G	G	P-F	F-G	G	E
Butyl Rubber – IIR	AA, BA	Med	-65 to 250	F-G	G	G-E	E	G	F	Р	E	F	P	G-E	F-G	G	G	G	G	E
Chloroprene (Neoprene®) – CR	BC, BE	Med	-40 to 225	G-E	F-G	G-E	F-G	G	F	G-E	G	G	F-G	G-E	F	Р	F-G	G	E	G
Chlorosulfonated Polyethylene (Hypalon®) – CSM	CE	Med	-20 to 250	G-E	G	G-E	E	F-G	F	G	G	G	F	E	F	F	G	F	F-G	E
Epichlorohydrin - CO, ECO	СН	Med	-55 to 275	F-G	F-G	G-E	G	G-E	G	F	G-E	F-G	E	G-E	P-F	G	G	G	G	G-E
Ethylene Acrylic (Vamac°) – AEM	EE	Med	-30 to 300	G	F	P-G	F-G	G	F	Р	E	G-E	F	E	G	Р	F	G	G	E
Ethylene Propylene – EPM, EPDM	AA, BA, CA, DA	Low	-60 to 250	G-E	E	E	E	G-E	G-E	Р	G	G-E	P	E	G-E	E	G-E	G-E	E	E
Fluorocarbon - FKM	нк	High	-15 to 400	G	E	G	E	Р	G	E	G	E	E	E	G-E	Р	F	G-E	G	E
Fluorosilicone - FVMQ	FK	High	-70 to 400	Р	G	G	G	E	Р	E	Р	E	G	E	G-E	F-G	Р	Р	E	E
Hydrogenated Nitrile – HNBR	DH	High	-25 to 300	E	G	G	F-G	G	E	Р	G	G-E	E	G-E	G-E	G	E	E	E	G-E
Nitrile – NBR, XNBR	BF, BG, BK, CH	Low	-30 to 250	G-E	F	F	F-G	G	G-E	P	G	G	E	Р	G-E	F	F-G	G-E	G-E	P-F
Perfluoroelastomer – FFKM	КК	V High	-10 to 500	Р	E	E	E	Р	F	E	G	E	E	E	Р	G-E	P-F	F-G	G-E	E
Polyacrylate – ACM	DF, DH	Med	0 to 350	G	Р	Р	Р	Р	F	Р	E	G	E	G-E	F	Р	F-G	F	Р	E
Polytetrafluoroethylene (Teflon®) – PTFE	None	High	-300 to 500	P-G	E	E	E	E	Р	E	F	E	E	E	Р	E	E	E	E	E
Polyurethane – AU, EU	BG	High	-40 to 180	E	Р	F	F	G	E	Р	G	P	G	E	F	Р	G-E	E	P/G	E
Silicone - MQ, PMQ, VMQ, PVMQ	FC, FE, GE	Med	-65 to 400	Р	F-G	F-G	F	E	Р	G	Р	E	F	E	G-E	F-G	Р	Р	E	E
Styrene Butadiene – SBR	AA, BA	Low	-50 to 225	E	F	F	F	G	G-E	P	F	F	P	Р	G	F	F-G	G-E	G-E	F
Viton™ ETP - FEPM	НК	High	-10 to 400	F	E	E	E	P	F	E	F	E	E	E	Р	F-G	F	G	E	G

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E = Excellent G = Good F = Fair P = Poor

# PROUD TO BE PART OF THE HERCULES OEM GROUP

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#### CERTIFICATIONS























A wide assortment of certified compounds are available. UL and NSF Certified compounds are manufactured by Hercules OEM Group. Please contact Hercules 0EM Group for more information regarding UL and NSF Certified compounds. All certification marks are the property of their respective owners.

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