O-Rings
Custom Molded Rubber
Gaskets
Mechanical Seals
Hydraulic Seals
Machined Plastics
Radial Shaft Seals
Rubber-to-Metal Bonded
Engineered Compounds
Standard Compounds
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
  - O-Rings
  - Large Diameter Seals
  - Smallest Splicing Capability 6.5" ID

**INDUSTRIES**
- Aerospace
- Automotive
- Oil & Gas
- Filtration
- Medical
- HVAC
- Fluid Power
- Pool & Spa
- General Industrial
- Agriculture
- Water & Wastewater
- Food & Beverage
Products & Materials

O-RINGS
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.

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.

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.

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.

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.

GASKETS
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.

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.

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.
SECTION 1: STANDARD COMPOUNDS

**AFLAS® (TFE/P, FEPM)**
**OPERATING TEMPERATURE**: +15º to +600º F
**COMPOSITION**: Medium density copolymer of tetrafluoroethylene and propylene.

**BUTYL RUBBER (IIR)**
**OPERATING TEMPERATURE**: -65º to +250º F
**COMPOSITION**: Medium density copolymer of isobutylene and a small amount of isoprene.

**CARBOXYLATED NITRILE (XNBR)**
**OPERATING TEMPERATURE**: -10º to +250º F
**COMPOSITION**: Medium density terpolymer of acrylonitrile, butadiene, and a diene monomer containing carboxylic acid.

**CHLOROPRENE RUBBER (CR, polychloroprene, Neoprene)**
**OPERATING TEMPERATURE**: -40º to +225º F
**COMPOSITION**: Produced from the chloroprene monomer, a combination of chlorine and butadiene. Medium density.

**ETHYLENE ACRYLIC RUBBER (AEM, Vamac®)**
**OPERATING TEMPERATURE**: -30º to +300º 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**: -60º to +250º 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**: +15º to +600º F
**COMPOSITION**: High density copolymer of vinylidene and hexafluoropropylene.

**FLUOROSILICONE RUBBER (FVMQ, Silastic FSR®, FSE®)**
**OPERATING TEMPERATURE**: -70º to +400º F
**COMPOSITION**: Low density fluorinated silicone rubber.

**HIGHLY SATURATED NITRILE (HNBR, HSN, NBM, Therban®, Zetpol®)**
**OPERATING TEMPERATURE**: -25º to +300º F
**COMPOSITION**: Formed by hydrogenating the nitrile copolymer of butadiene and acrylonitrile. Medium density.

**NATURAL RUBBER (NR, Hevea)**
**OPERATING TEMPERATURE**: -60º to +225º F
**COMPOSITION**: Coagulated, dried rubber derived from the latex of the Hevea Brasiliensis tree. Low to medium density.

**NITRILE RUBBER (NBR, Buna N, Paracrit®, Nipol®)**
**OPERATING TEMPERATURE**: -30º to +250º F
**COMPOSITION**: Medium density copolymer of butadiene and acrylonitrile.

**PERFLUOROELASTOMER (FFKM, Kalrez®, Chemraz®)**
**OPERATING TEMPERATURE**: -10º to +500º F
**COMPOSITION**: High density copolymer of tetrafluoroethylene and a perfluorinated ether.

**POLYACRYLATE RUBBER (ACM, polyacrylic rubber, Hycar®)**
**OPERATING TEMPERATURE**: -30º to +250º F
**COMPOSITION**: Medium density acrylic ester copolymer.

**POLYURETHANE (AU, EU, PU, Millathane®)**
**OPERATING TEMPERATURE**: -40º to +180º F
**COMPOSITION**: Low to medium density polyurethane diisocyanate.

**PTFE (Teflon®, Polyflon®)**
**OPERATING TEMPERATURE**: -300º to +500º F
**COMPOSITION**: Fluorocarbon resin generically known as polytetrafluoroethylene.

**SILICONE RUBBER (VMQ, PSilastic HCR®, Elastosil®)**
**OPERATING TEMPERATURE**: -65º to +400º F
**COMPOSITION**: Medium density inorganic rubber consisting primarily of polymethylsiloxane and variations.

**STYRENE-BUTADIENE RUBBER (SBR, GRS, Buna-S)**
**OPERATING TEMPERATURE**: -50º to +225º F
**COMPOSITION**: Low density copolymer of styrene and butadiene.

**VITON™ ETP (Viton™ Extreme™)**
**OPERATING TEMPERATURE**: -10º to +400º 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

This document is for material properties reference only and should not be construed as a performance guarantee unless specifically stated otherwise. All implied guarantees are expressly disclaimed, including without limitation to fitness for use. All users of this information are responsible for assuring that it is suitable for their needs.

*Excellent, good, fair and poor are intended to serve as general guidelines only. Actual testing in the application environment is always recommended.

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<tbody>
<tr>
<td>Aflas® – FEPM</td>
<td>HK</td>
<td>High</td>
<td>15 to 400</td>
<td>G</td>
<td>E</td>
<td>E</td>
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<td>Chlorosulfonated Polyethylene (Hypalon®) – CSM</td>
<td>CE</td>
<td>Med</td>
<td>-55 to 275</td>
<td>F-G</td>
<td>G</td>
<td>G</td>
<td>E</td>
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<td>E-G</td>
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<tr>
<td>Ethylene Acrylic (Vamac®) – AEM</td>
<td>EE</td>
<td>Med</td>
<td>-30 to 300</td>
<td>G</td>
<td>F</td>
<td>P</td>
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<tr>
<td>Hydrogenated Nitrile – HNBR</td>
<td>DH</td>
<td>High</td>
<td>-25 to 300</td>
<td>E</td>
<td>G</td>
<td>G</td>
<td>F-G</td>
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<td>Perfluoroelastomer – FFKM</td>
<td>KK</td>
<td>V High</td>
<td>-10 to 500</td>
<td>P</td>
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<td>E</td>
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<td>P-E</td>
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<tr>
<td>Polytetrafluoroethylene (Teflon®) – PTFE</td>
<td>BG</td>
<td>High</td>
<td>-40 to 180</td>
<td>E</td>
<td>P</td>
<td>F</td>
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<td>Viton® ETP – FEPM</td>
<td>HK</td>
<td>High</td>
<td>-10 to 400</td>
<td>F</td>
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**E** = Excellent    **G** = Good    **F** = Fair    **P** = Poor
LIMITED WARRANTY   Hercules OEM Group ("Seller") warrants that its products ("Goods") will perform in accordance with their specifications; that the goods will be free from manufacturing defects for a period of twelve (12) months from the date of delivery of the goods to Buyer; and that the goods will be as specified by Buyer in the purchase order. Seller should have the right to elect to either refund the purchase price for any defective goods or replace any defective goods, provided that the goods were used in the manner for which they were manufactured. Seller does not warrant that the goods are fit for any particular purpose. Seller should have no obligation to refund the purchase price or replace goods that are rendered defective by a Buyer or a third party after they leave Seller's place of shipment.

LIMITED LIABILITY   Seller's liability for its goods is limited to their terms set forth in Seller's express warranty set forth above, in no event shall Seller's liability exceed the total purchase order price. Seller is not assuming any liability for any indirect, collateral, special, incidental or consequential losses or damages suffered by Buyer, or by any end-user or other third party, including but not limited to, lost profits, loss of business reputation and/or lost business opportunity, for any possible cause of action or claim arising out of or related to the goods sold to Buyer, even if Seller has been advised of the possibility of such loss or damage.