

HIGH PERFORMANCE O-RINGS &
SEALING TECHNOLOGY



One Company, Many Solutions

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### PRODUCT DEVELOPMENT ASSISTANCE

Compound selection is critical to O-Ring performance. Boyd O-Ring specialists can recommend the right elastomer to meet your performance & budget requirements, helping to accelerate your time to market by streamlining seal design. Mechanical design, elastomer science & application KPI analysis assure the best fit & function for long term seal performance.

### STANDARD STOCK & QUICK SHIPMENT

The most common rubber compounds in all AS568 O-Ring sizes are stocked for immediate shipment from Modesto, CA or Chicago, IL. Standard stock O-Rings can be delivered to most North American regions in 1 - 3 business days. Additional Boyd shipping locations may be arranged upon request from Oregon, Indiana, South Carolina & Georgia or internationally from China, Germany, Thailand, South Korea & Vietnam.

Compounds	<b>Lead Time</b>	Duro	<b>Usage Temp</b>	Typical Usage
C200-70 Black Neoprene	8 - 10 Weeks	70	-40F to +250F	Oxygen, Ozone & Oil Resistance
E300-70 Black EPDM & FDA Grade	Stock	70	-65F to +300F	Oxygen, Sunlight & Ozone Resistance
E305-50 Black EPDM	8 - 10 Weeks	50	-65F to +300F	Low Pressure, Pool & Spa
E310-70 Purple EPDM	8 - 10 Weeks	70	-65F to +300F	Weather, Ozone Resistance
E330-70 Black Lexan Compat. EPDM	3 Weeks	70	-65F to +300F	Plastic Applications, Pool & Spa
E350-70 Black Peroxide Cured EPDM	8 - 10 Weeks	70	-65F to +300F	High Temp Water Applications
E35070/C Chloramine Resistant EPDM	8 - 10 Weeks	70	-65F to +300F	Chloramine Applications
E350-70/F Black FDA Peroxide Cured EPDM	8 - 10 Weeks	70	-65F to +300F	High Temp Food, Water, Steam
E357-70 Peroxide Cured EPDM	8 - 10 Weeks	70	-65F to +300F	High Temperature Brake Applications
E361-70 Sulfur Cured Black NSF-61 EPDM	8 - 10 Weeks	70	-65F to +300F	NSF-61 Water Applications
E362-70 Peroxide Cured NSF-61 EPDM	8 - 10 Weeks	70	-65F to +300F	High Temp NSF-61 Applications
E363-70 WRAS EPDM	8 - 10 Weeks	70	-65F to +300F	British / UK Water Service
E368-70/M Black FDA/3A Sanitary EPDM	8 - 10 Weeks	70	-65F to +300F	Food, Water, Milk, Edible Oil Service
E388-70 Black UltraSlip™ EPDM & FDA Grade	8 - 10 Weeks	70	-65F to +300F	Internally Lubricated EPDM
F900-70 Blue Fluorosilicone	8 - 10 Weeks	70	-80F to +350F	Broad Temperature & Fuel Service
HNBR9DR Black HNBR Decompression	3 - 4 Weeks	90	-40F to +302F	Abrasion, Low Temp, Norsok M710
N100-70 Black Nitrile	Stock	70	-40F to +250F	Oil & Hydraulic Applications
N105-50 Black Nitrile	8 - 10 Weeks	50	-40F to +250F	Low Pressure, Pool & Spa
N110-70 Low Temp Nitrile	8 - 10 Weeks	70	-65F to +250F	Low Temperature Oil & Hydraulic
N115-70 Ozone Resistant Nitrile	8 - 10 Weeks	70	-40F to +250F	Ozone Resistance, Pool, Spa, Irrigation
N120-70 Oil Service Nitrile	8 - 10 Weeks	70	-40F to +250F	High Temperature Oil Applications
N130-70 Black Lexan/ABS Compatible Nitrile	8 - 10 Weeks	70	-40F to +250F	Plastic Applications, Pool & Spa
N140-90 High Pressure Nitrile	Stock	90	-40F to +250F	High Pressure Oil Applications
N150-70 High Acrylo Nitrile	8 - 10 Weeks	75	-25F to +250F	Fuel Service Applications
N157-75 Peroxide Cured Nitrile	8 - 10 Weeks	70	-40F to +250F	High Temperature Nitrile
N161-70 Black NSF-61 Nitrile	8 - 10 Weeks	70	-40F to +250F	NSF-61 Water Service, Pool & Spa
N162-70 Black KTW Nitrile	8 - 10 Weeks	70	-40F to +250F	European Water Service
N163-70 Black WRAS Nitrile	8 - 10 Weeks	70	-40F to +250F	British / UK Water Service
N168-70 Black FDA Nitrile	Stock	70	-40F to +250F	Food & Water Service
N168-70/M Black FDA/3A Sanitary Nitrile	8 - 10 Weeks	70	-40F to +250F	Food, Water, Milk, Edible Oil Service
N188-70 UltraSlip™ Nitrile & FDA Grade	8 - 10 Weeks	70	-40F to +250F	Internally Lubricated Nitrile
PF10-80 Black Perfluoroelastomer	3 - 4 Weeks	80	-22F to +590F	Exceptional Chemical Resistance

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#### ENDLESS CUSTOMIZATION

More than 250 different rubber compounds are available. Special colors, sizes & compound formulations can be created for your unique needs.

### QUALITY SYSTEMS

O-Rings ship from facilities with stringent quality management systems for consistent performance, traceability & trusted reliability.

TS16949 ISO13485 AS9100C ISO9001 ISO14001

#### BEST RAW MATERIALS

DuPont™, Bayer, 3M™ & Zeon Chemical Base elastomers assure compliance to ASTM, SAE, various automotive or customer specifications.

### CLEANROOM MANUFACTURING

For ultraclean, contaminant & particulate-free product needs, Boyd can deliver pure & clean O-Rings & sealing solutions from Class 100 to 100K cleanroom environments.

Compounds	<b>Lead Time</b>	Duro	<b>Usage Temp</b>	Typical Usage
PF15-80 Black Perfluoroelastomer	3 - 4 Weeks	80	-4F to +500F	General Chemical Resistance
PF20-80 Black Perfluoroelastomer	3 - 4 Weeks	80	-22F to +600F	Exceptional Chemical & Temp Res
PF25-80 White Perfluoroelastomer	3 - 4 Weeks	80	-4F to +446F	Low Particle Generation
PF30-80 White Perfluoroelastomer	3 - 4 Weeks	80	-30F to +590F	Low Particle, Excellent for Plasma
PF35-80 Translucent Perfluoroelastomer	3 - 4 Weeks	80	-4F to +446F	Low C.S., ExInt Outgas, Poor Physical
PF40-80 White Perfluoroelastomer	3 - 4 Weeks	80	-4F to +446F	Gen. Chem & Good Phys Properties
PF45-80 Off-white Perfluoroelastomer	3 - 4 Weeks	80	-22F to +446F	Aggressive Amines & Chem Process
PF50-80 Translucent Brn Perfluoroelastomer	3 - 4 Weeks	80	-22F to +590F	Low Metallic Ion, Exnl Outgas & Thermal
PF60-80 Black Perfluoroelastomer	3 - 4 Weeks	80	-22F to +572F	Chem/Hi Temp/Nace TM0297/Norsok M710
PTFE-WH White Teflon®	8 - 10 Weeks	-	-300F to +500F	Wide Temperature Crush Seal
S500-70 Red Silicone & FDA Grade	Stock	70	-65F to +400F	Good Chemical & Temp Resistance
S510-70 White FDA Silicone	8 - 10 Weeks	70	-65F to +400F	Purity, Broad Temp & Chem Resistance
S561-70 Red NSF-61 Silicone	8 - 10 Weeks	70	-65F to +400F	NSF-61 Water Service, Pool & Spa
S567-70 Red High Temp FDA Silicone	8 - 10 Weeks	70	-65F to +572F	High Temp & Chemical Resistance
S568-50 Red Low Pressure FDA Silicone	8 - 10 Weeks	50	-65F to +400F	Low Pressure, Temp/Chem Resistant
S568-70 Red 3A Sanitary FDA Silicone	3 Weeks	70	-65F to +400F	Food, Water, Milk, Edible Oil Service
S569-70 Clear USP Class VI Silicone	8 - 10 Weeks	70	-65F to +400F	USP Class VI (not for human implantation)
S590-70 Clear FDA Medical Silicone	8 - 10 Weeks	70	-65F to +400F	Purity, Broad Temp & Chem Resistance
S598-70 Clear FDA Silicone	8 - 10 Weeks	70	-65F to +400F	Purity, High Temp, Chem Resistance
V700-75 Black Fluoroelastomer	Stock	75	-20F to +400F	Chemical & Temperature Resistance
V700-75/W White Fluoroelastomer	8 - 10 Weeks	75	-20F to +400F	Purity, Chemical, Temp Resistance
V708-75 Brown Fluoroelastomer	Stock	90	-20F to +400F	Chemical & Temperature Resistance
V709-90 Hi Pressure Fluoroelastomer	8 - 10 Weeks	75	-20F to +400F	High Pressure Chemical & Temp
V760-75 Black FDA Viton®	8 - 10 Weeks	75	-20F to +400F	High Temp Food or Water Service
V768-75 Brown 3A Sanitary FDA Viton®	3 Weeks	75	-20F to +400F	High Temp Milk or Edible Oil Service
V797-75 Genuine Dupont™ Viton®	8 - 10 Weeks	75	-20F to +400F	Chemical & Temperature Resistance
V798-75 Brown Genuine Dupont™ Viton®	8 - 10 Weeks	75	-20F to +400F	Chemical & Temperature Resistance
V7DB-90 Black Base Resistant Viton®	3 - 4 Weeks	90	-22F to +482F	Base, ATF, Steam for Nace TM0297
V7GBD90 Black Viton® B	3 - 4 Weeks	90	-22F to +482F	Broad Chem, Temp for Norsok M710
V7GF75 Black Viton® GF	8 - 10 Weeks	75	0F to +400F	Improved Chemical Resistance
V7GLT75 Black Viton® GLT	8 - 10 Weeks	75	-40F to +350F	Low Temp & Chemical Resistance
V7GLTD9 Black Viton® GLT	3 - 4 Weeks	90	-22F to +482F	Low Temp/ChemRes/NaceTM0297/NorsokM710

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# O-RING & SEALING SOLUTIONS FOR DIVERSE MARKETS

#### TRANSPORTATION

Harsh environments across industries like passenger automotive, heavy duty trucking, agriculture, construction equipment and aerospace create some of the world's most demanding performance conditions. Extreme temperatures, vibration, abrasion and exposure to various chemicals drive critical elastomer selection to exceed warranty and performance goals. Custom compounds have been developed to meet the most stringent ASTM, SAE, OEM and Tier 1 specifications and are continually refined to meet the newest biofuel, exhaust and emissions requirements.

#### MEDICAL

Medical devices require O-Rings and seals that meet USP VI standards for patient safety, have trusted performance, adhere to traceability standards and are manufactured in cleanrooms. Best-in-class standard and custom O-Rings and seals for a variety of medical needs (syringes, connectors, stethoscopes, drug delivery devices) exceed demanding medical industry quality, lead time, value and customer experience objectives.

### FOOD & BEVERAGE

Compliance to FDA, 3A sanitary, NSF-61 and various international water specifications are required in the food processing, liquid dispensing and water component markets. Food and beverage O-Rings are manufactured with ingredients listed in the US Code of Federal Regulations (21 CFR 177.2600) for rubber articles intended for repeated use in contact with dry or aqueous food.

### OIL, GAS & INDUSTRIAL

Oil and gas pumps, valves, fittings and equipment require O-Ring and sealing solutions to perform with exposure to extreme heat, pressure and harsh chemicals in a multitude of sizes, ranging up to > 100" ID. Specialty compounds like peroxide and triazine-cured perfluoroelastomers assure heat / chemical resistance and longest service life. Norsok M710 and Nace TM0297-tested elastomers exceed requirements for rapid gas decompression (RGD) environments.

#### **ELECTRONICS**

Semiconductor vacuum applications and water or dust ingress protection in consumer electronics demand sealing solutions and O-Rings manufactured in the cleanest of environments. With cleanroom manufacturing ranging from Class 100 to 100K, particulate and contaminant-free O-Rings are available in a wide range of compounds, including white or clear for enhanced purity, measured conductivity and electrical resistance for UL compliance and special measures to reduce outgassing.

### **O-Rings.com by Boyd Corporation**

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