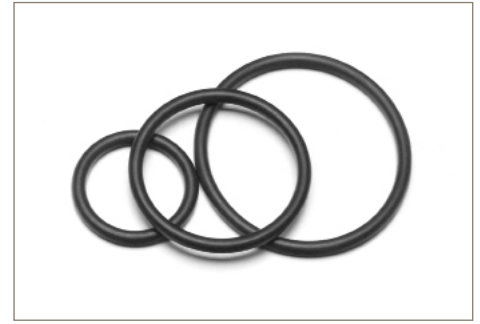


FAQ

Frequently Asked Questions



Question	Answer
Seal Design	
Are there backup rings for face seal glands?	Face seals are designed to achieve metal-to-metal contact between the faces, meaning a backup ring is not necessary.
How can I estimate the amount of friction an O-ring will develop?	Application testing is the best way to determine running friction as application factors can alter the running friction. Click here to view friction estimation.
How can I predict the compressive load generated by squeezing an O-ring?	Parker has compiled a series of tables of empirical data that relate compressive load generated per inch of circumference to the O-ring's cross-section, hardness, and amount of squeeze.
How do I design the most reliable O-ring seal groove?	Parker provides recommendations for groove dimensions for all standard O-rings in a number of seal configurations. Parker's inPHorm for O-rings provides a great deal of assistance in seal material selection. Alternatively, we've developed a single page Seal Design Quick Reference . For safety's sake, we strongly encourage all customers to thoroughly test all seal designs before relying upon them. Parker cannot guarantee that any seal design will fully meet your specific needs.
How long will this seal last in application?	Unfortunately, there is no method available yet to accurately predict the application life of a rubber seal. Actual product performance testing remains the most useful method of determining a maximum time before replacement.
If I don't use Parker's seal gland recommendations, will my design still work?	Parker provides standard gland design recommendations. Parker recommends application testing to ensure a robust joint. Click here for the Seal Design Quick Reference.
In a face seal with internal pressure, is an internal groove wall necessary?	Some customers choose to reduce their machining costs by inserting O-rings into counter-bores rather than separately-machined face seal grooves. This design can be successful as long as a negative pressure situation caused by vacuum or high fluid flow velocity is avoided. (It is possible to suction an O-ring out of a counter-bore groove.) This design may also affect fluid flow dynamics, so validation testing is highly recommended.
Should I use a backup ring?	Backup rings are used to improve the pressure resistance of a softer rubber seal to that of a 90 durometer seal material. Use our Extrusion Chart to determine if a backup ring is needed based on your seal hardness, gland clearance, and fluid pressure.
What seal material should I use for an application?	The choice of a seal material is based on a number of factors, including the fluids in contact with the seal, the temperature, the pressure, any third-party requirements, and whether the seal is used statically or dynamically. Parker's inPHorm for O-rings provides a great deal of assistance in seal material selection.
What's the best way to assemble / install an O-ring?	In short, there is no one way to correctly install an O-ring. Any preferred method of assembly should prevent installation damage to the O-ring. Surface lubrication, lead in chamfers, and the removal of all sharp edges are typically necessary in all O-ring assemblies.
What's the pressure rating of an O-ring?	Use our Extrusion Chart to determine if the maximum recommended pressure of an O-ring seal based on your seal hardness and gland clearance.
When using a regular round O-ring in a rectangular groove path, what minimum radius should I use at the corners?	Parker recommends using 6 times the cross-section of the seal (for example, 1.260" for an O-ring with 0.210" cross-section) for the radius to the inside edge of the groove. If space is limited, this can be reduced to three times the cross-section; a smaller radius is likely to cause buckling of the seal and installation difficulties.
Why is my O-ring leaking?	There are a number of reasons for O-ring leakage. Try our on-line Leak Troubleshooting Tool to begin the process of seal failure analysis.



Question	Answer
Seal Material Technology	
Does Parker make Aflas®?	Aflas® is a registered trademark of Asahi Glass Co. Ltd of Japan for their TFE/P elastomer. Parker compounds V1006-75 and V1041-85 are made from this type of technology. Again, Parker avoids trademark infringement by referring to this type of material as TFE/P.
Does Parker make Chemraz®?	Chemraz® is registered trademark of Greene, Tweed for perfluoroelastomer. Parker's perfluorinated and perfluorinated ULTRA compete in this marketplace.
Does Parker make Kalrez®?	Kalrez® is a registered trademark of DuPont Dow Elastomers for perfluoroelastomer. Parker's perfluorinated and perfluorinated ULTRA compete in this marketplace.
Does Parker make Viton®?	Viton® is a DuPont Dow Elastomers trademark for fluorocarbon elastomer. To avoid trademark infringement, Parker refers to this type of material technology under the chemical description "fluorocarbon".
How can I compare materials for off-gassing characteristics?	Parker has evaluated a number of compounds for their specific vacuum weight loss (off gassing.) Keep in mind that these values are highly dependent upon the compound formula, so these values are for these specific Parker compounds. They should not be accepted as "industry standard" values for generic materials.
Is this seal material peroxide-cured or sulfur-cured?	Click here to view our letter on cure system.
My question's not on this list. How do I get help?	Contact our Applications Engineering Team at ordmailbox@parker.com or via online chat.
What are the different types of fluorocarbon rubber?	Please see our Fluorocarbon Fact Sheet for a detailed description of the different types of fluorocarbon elastomers available.
What is the difference between EP, EPR, and EPDM?	EPR is an abbreviation for Ethylene-propylene copolymer, while EPDM is an abbreviation for Ethylene-Propylene Terpolymer. We've written a brief letter that describes the differences between EPR and EPDM.
What is the shelf life of a rubber seal?	The recommended shelf life of a rubber seal is determined by the base polymer. Click here for a letter that explains Parker's recommendations for rubber shelf life.
What is Viton® A?	Viton® is a registered trademark of DuPont Dow Elastomers for fluorocarbon elastomer. "A-type" fluorocarbon is considered "standard" fluorocarbon technology; this is the polymer used to make Parker compound V0747-75 and many others. Please see our Fluorocarbon Fact Sheet for a detailed description of the different types of fluorocarbon elastomers available.
What seal material is recommended for my fluid(s)?	Please see Parker ORD 5700 or call applications engineer
What's the difference between nitrile and HNBR?	HNBR (hydrogenated nitrile, also called HSN) is chemically similar to nitrile, except the carbon-carbon double bond found in nitrile is not present in HNBR, providing temperature stability up to 325 F and resistance to atmospheric ozone and weathering.
What's the difference between nitrile, NBR, and Buna-N?	These terms are synonyms.
What's the difference between Shore A, Shore M, Shore D, IRHD, etc?	<p>Each of these is a method of testing the hardness of a rubber sample by pressing an indenter (called a frustum) into a rubber sample and measuring the force and / or amount of penetration. Each of these methods uses a slightly different indenter, method of controlling the force, and / or method of measuring the penetration. As a result, each of these hardness measurement devices will generate a different number on the same sample, and there is no direct correlation from one "scale" to another.</p> <p>In the US, Shore A is the most common method of measuring rubber hardness. Shore D is typically used for very hard rubber compounds and plastics (50 Shore D is approximately 90 Shore A). Shore M is specialized for use on O-rings. IRHD is a fully automated measuring procedure preferred in Europe. At Parker, we control each batch of rubber by measuring the Shore A hardness.</p> <p>All of the test methods can provide repeatable results (all the numbers will be about the same for a given sample and test method), but the number provided by one method may be very different from that of another. For this reason, it is not valid to compare the hardness results obtained by one test method with the pass / fail limits written for another.</p>
Where can I get an MSDS for a Parker O-ring?	Rubber O-rings are considered mechanical goods, and so do not require Material Safety Data Sheets per OSHA regulations.



Question	Answer
Parker Compounds	
Do Parker O-rings contain asbestos?	No.
Do Parker O-rings contain latex rubber?	The term “latex rubber” is commonly used (incorrectly) to refer specifically to natural rubber latex. Parker O-Rings do not contain any natural rubber latex, which is suspected of causing allergic reactions in some people.
Do Parker O-rings contain mercury or are they made with mercury-containing equipment?	No.
How does an internal lubricant work?	Internal lubricants are typically oils or waxes that are mixed into the raw material prior to molding. In application, this oil or wax migrates to the surface of the O-ring to provide lubrication and extend seal life. Internal lubricants can be extracted by exposure to hot oils or high heat. Internally lubricated compounds seldom if ever “run out” of internal lubricant solely through use.
Is N70 a Parker compound number?	N70 is not a Parker compound number. This is probably a reference to generic 70 durometer nitrile rubber. We recommend Parker compound N0674-70 as a replacement / improvement.
What is the replacement compound for an obsolete seal material?	Contact Parker O-Ring Division for the recommend replacement for any obsolete seal material at 859-335-5101
What O-ring compounds are internally lubricated?	Parker offers a number of internally lubricated compounds.
What’s the difference between N674, N674-7, N674-70, N0674, and N0674-70?	Nothing. Parker O-Ring Division has adapted its compound numbering system over the years, and all of these names refer to the same O-ring compound. We have written a letter explaining our compound numbering system in more detail.
Where can I find information on a specific Parker compound?	ORD 5712 or interactive on website
Where can I get a material test report for a Parker O-ring?	Material Test Reports for Parker compounds can be viewed over the Internet or on Parker’s inPHorm seal design software package.
Why can’t I find this compound in the Parker catalog?	Because Parker is constantly developing new materials, only the standard compounds are shown in the Parker O-ring Handbook and O-ring Reference Guide. For an updated compound offering list, refer to Parker’s ORD 5712.
Why does this O-ring have a dull gray or white powder on the surface?	Some seal materials exhibit a dusty gray or white coating on the outside surface of the seal material called bloom. Bloom is primarily composed of non-reacting catalysts used to speed the curing process. The presence of bloom seldom if ever affects seal performance in application.



Question	Answer
Specifications	
Parker offers a number of seal materials certified to the most common AMS and MIL material specifications.	Parker offers a number of seal materials certified to the most common AMS and MIL material specifications .
What Parker compound meets this ASTM D2000 / SAE J200 specification?	Parker supplies O-ring compounds to meet most standard ASTM D2000 / SAE J200 material specifications.
Colors	
Are all O-rings color-coded?	Across the rubber industry, O-rings are not color coded. Many customers adopt a method of color-coding to help prevent mixed seal inventory. Seal materials cannot be conclusively identified by color.
Can I get this O-ring in a different color?	In some cases, compounds of similar performance and different colors may be available, or we may be able to develop a custom material for your application. Refer to the O-Ring Material Offering Guide for assistance or contact a Parker Applications Engineer. Because of our ISO / QS controls, we cannot simply change the color of an existing seal material.
What do the colored dots on my O-ring mean?	Any colored dots applied to an O-ring are done so at customer request or to meet the requirements of a specification. For example, NAS 1613 Rev 4 requires all Class 1 material to have 1 white stripe and 1 white dot for identification.
What is ChromAssure?	The ChromAssure System
Backup Rings	
Are there backup rings for 5-xxx O-rings?	There are no standard backup rings for 5-xxx O-rings. Parker can design and manufacture custom backup rings for these O-rings as needed.
What is a Parbak?	Parbaks are hard rubber backup rings that are used to increase the pressure rating of a seal design . They're typically made from Parker compound N0300-90 or N1444-90, but can also be made for other materials as needed.
What's the difference between Parbak rubber backup rings and PTFE backup rings?	Parbak rubber backup brings can be stretched during installation and return to their original dimensions. In this regard, they are much easier to install than PTFE backup brings, and do not contain a scarf cut edge that may damage an O-ring seal.
Lubricants	
Does Parker offer PTFE coating on O-rings?	For a small additional charge, Parker can provide a thin coating of dry PTFE to the outside surface of an O-ring. This coating is available in a number of colors, and can be extremely useful in an automated assembly operation. Over time, this coating can flake off, so the impact of small particulate contamination should be evaluated prior to use.
Does Parker provide other dry surface coatings?	For customers who so desire, Parker can coat the surface of O-rings with many other surface treatments . There is an additional charge for this surface coating.
What is the recommended shelf life of Parker O-ring lubricants?	The recommended shelf life for Parker's O-ring lubricants O-Lube and Super-O-Lube is one year from the date of opening.
What lubricant should I use with this O-ring?	Parker provides usage recommendations for each of its lubricants
Where can I get an MSDS for a Parker O-ring Lubricant?	Material Safety Data Sheets for Parker's O-ring lubricants are available on-line.
Will other lubricants work with this O-ring?	In some applications, it may be desirable to use alternate lubricants with O-rings. For example, vegetable oil or shortening may be used in FDA applications. In these cases, it is necessary to test to ensure complete compatibility with the seal material in question.



Question	Answer
Miscellaneous	
Can I get my parts manufactured in a clean room?	Certain FKM and FFKM compounds can be produced in the clean room.
Can I have my O-rings made in the USA?	Contact Parker O-ring Division.
Can Parker make this rubber part, even though it's not an O-ring?	Parker provides a number of custom molded and custom engineered rubber seals through Parker O-ring Division and Parker Engineered Seals Division.
Can Parker predict the gas permeation rates through an O-ring?	ORD 5700 has gas permeability rates for reference.
How can I get a copy of Parker inPHorm?	Parker's inPHorm seal design software can be downloaded from the Internet.
How can I get a paper copy of the Parker O-Ring Handbook?	You can obtain a hard copy of Parker's O-ring Handbook by calling 1-800-C-Parker or by e-mailing c-parker@parker.com .
How can I get an electronic copy of the Parker O-Ring Handbook?	Electronic (PDF) versions of the O-ring Handbook are available on our website. Also the Reference Guide from Parker's inPHorm software can be downloaded as a Windows help file. Save this file onto your Windows-based PC and double-click on the icon.
How can I request a quotation?	See our distributor locator for the closest location near you.
How do I order Parker O-rings?	Select O-rings can be ordered online. For special needs, contact your local distributor or Parker O-ring Division.
What size O-rings does Parker manufacture?	In addition to the standard sizes provided in the O-ring sizes link, we can also make custom O-rings

