

Parco

9021-95 Fluorocarbon Seals

Need Fuel Resistant FKM Seal?

Parco is committed to being the leader in high-performance fluorocarbon (FKM) seals. Seals made from our popular 95-durometer 9021-95 compound have outstanding physical properties and are competitively priced.

9021-95 Meets Your Needs

1. Outstanding Resistance to Extrusion

Modulus shows the amount a seal resists deforming under stress. A seal with high modulus is more extrusion resistant than a seal with low modulus. Seals made from Parco's 9021-95 compound are ideal for high-pressure oil field applications that cannot use contoured back-up rings (see Figure 1). At 100 percent elongation, seals made from Parco's 9021-95 compound have a modulus of 2,601 psi.

2. Excellent Resistance to Compression Set

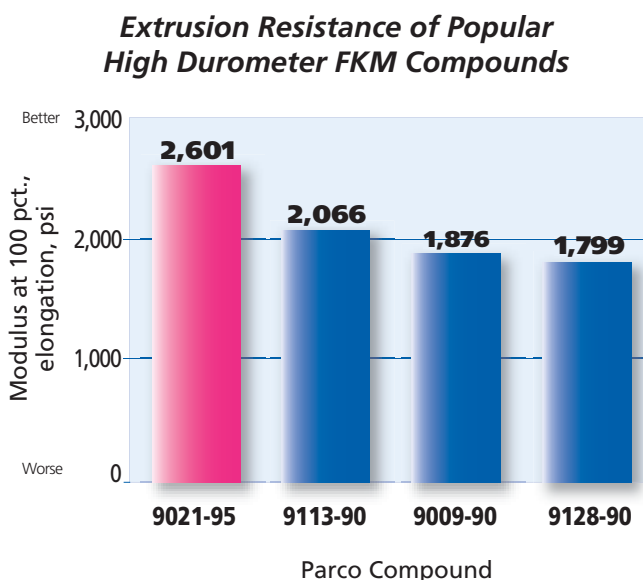
To perform properly, seals must resist taking a set from compression after being installed. When a seal takes a set, it no longer exerts force on the mating surfaces, resulting in leakage. A compound with low compression set, like 9021-95, better maintains its elastomeric properties and original thickness, preserving seal integrity. Seals made from Parco's 9021-95 compound provide excellent

resistance to compression set at higher temperatures. After testing 9021-95 for 22 hours at 392°F, it had a compression set of only 9 percent.

3. Huge Inventory

We stock O-rings made from 9021-95 in almost all 369 standard sizes. We've also made it easy to check stock. Using our website, you can view our inventory 24 hours a day. If we receive your order before 2:30 p.m. Pacific time, you can receive your parts as soon as the next business day.

Fig. 1:



Source: Parco R & D data.

Parco seals made from 9021-95 have excellent extrusion resistance. With a modulus of 2,601 psi, 9021-95 outperforms other high durometer fluorocarbon compounds.

Key Features

Parco's 9021-95 fluorocarbon seals are ideal for use in high pressure applications. Key features include:

- **Outstanding resistance to extrusion**
Parco 9021-95 seals have a modulus at 100 percent elongation of 2601 psi.
- **Excellent resistance to compression set:**
Parco 9021-95 seals have a compression set of only 9 percent after 22 hours at 392°F.
- **Wide range of service temperatures:**
Parco 9021-95 seals are suitable for applications ranging from -20 to +400°F.

Chemical Resistance

USE WITH	DO NOT USE WITH
Carbon Tetrachloride Diester Synthetic Lubricants Gasoline Hot Air Toluene	Acetone Amines Ethyl Acetate

Typical Values for Compound 9021-95 95-durometer fluorocarbon

Section of Spec.	Physical Property	Requirement ¹	Typical Value	ASTM ² Test Method
Z1	Original Properties			
	Hardness, Shore A	95 ± 5	93	D2240
	Tensile strength, MPa (psi), min.	14(2031)	19.4(2812)	D412
	Ultimate elongation, pct., min.	100	108	D412
	Z2 Modulus at 50 pct. elongation, psi	Report	1388	D412
Z3	Modulus at 100 pct. elongation, psi	Report	2601	D412
Z4	Specific gravity	Report	1.84	D297
Basic	Fluid Aging, IRM³ 903 Oil 70 hours at 150°C (302°F) Volume change, pct., max.	10	1	D471
A1-10	Heat Aging 70 hours at 250°C (482°F) Hardness change, pts., Shore A, max. Tensile strength change, pct., max. Ultimate elongation change, pct., max.	10 -25 -25	1 -10 -19	D573
B31 B38	Compression Set, Plied pct. of original deflection, max. 22 hours at 23°C (73°F) 22 hours at 200°C (392°F)	20 20	11 9	D395 Method B
EF31	Fluid Aging, ASTM Reference Fuel C 70 hours at 23°C (73°F) Hardness change, pts., Shore A Tensile strength change, pct., max. Ultimate elongation change, pct., max. Volume change, pct.	±5 -25 -20 0 to 10	-2 -8 -3 3	D471
EO88	Fluid Aging, Hatco 7700 70 hours at 200°C (392°F) Hardness change, pts., Shore A Tensile strength change, pct., max. Ultimate elongation change, pct., max. Volume change, pct., max.	-15 to 5 -40 -20 25	-6 -11 -1 16	D471

¹Compound 9021-95 meets the requirements shown above for ASTM D2000 M7HK914 A1-10 B31 B38 EF31 EO88 Z1 Z2 Z3 Z4.

²ASTM is the acronym for the American Society for Testing and Materials. ³IRM is the acronym for Industry Reference Material.

Source: Parco Test Report 9356.

⚠ This brochure is intended as a guideline and reference. Appropriate testing and validation by users having technical expertise is necessary for proper use of Parco products.

Parco

Parco, Inc., 1801 S. Archibald Ave., Ontario, California 91761
909-947-2200 Fax 909-923-0288 parcoinc.com