

Parco

4200-70 Nitrile Seals

Need General-Purpose Nitrile Seals?

Parco is committed to being the leader in general-purpose nitrile seals. Because nitriles are versatile and inexpensive, they are the most popular industrial seal material. More than 50 percent of sealing needs can be met using nitrile. Parco recommends that you follow the general rule: consider nitrile seals first.

4200-70 Meets Your Needs

1. Excellent Physical Properties

Parco's 4200-70 70-durometer nitrile O-rings have excellent physical properties (see test report on reverse side). For nearly 40 years, 4200-70 O-rings have been used in a wide variety of applications with great results. So when you specify 4200-70, rest assured that you've made the right choice.

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 4200-70, better maintains its elastomeric properties and original thickness, preserving seal integrity. Seals made from Parco's 4200-70 compound provide excellent resistance to compression set. After

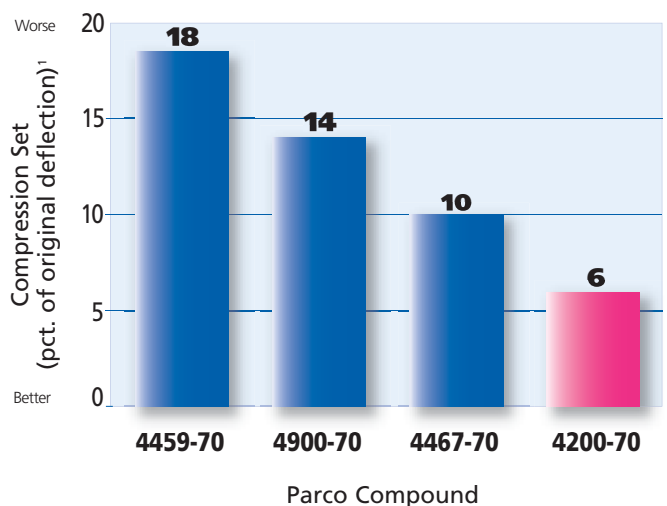
testing 4200-70 for 22 hours at 212°F, it had a compression set of only 6 percent.

3. Very Good Resistance to a Variety of Fluids

Nitrile compounds, like 4200-70, provide very good service in gasoline, crude oil, power steering fluid, hexane, toluene, water, water-based hydraulic fluids, and dilute bases such as sodium hydroxide.

Fig. 1:

Compression Set of Typical Parco 70-Durometer Nitrile Compounds



¹Compression set calculated after 22 hours at 100°C (212°F).
Source: Parco Test Reports.

Parco seals made from 4200-70 have excellent resistance to compression set. At 6 percent, 4200-70 outperforms other 70-durometer nitrile compounds.

Key Features

Parco's 4200-70 nitrile seals are ideal for use in a variety of applications. Key features include the following:

- **Excellent resistance to compression set:**
Parco 4200-70 seals have a compression set of only 6 percent after 22 hours at 212°F.
- **Very good resistance to a variety of fluids:**
Parco 4200-70 seals provide very good resistance to fluids, such as gasoline, crude oil, and power steering fluid.
- **FDA-conforming for food-handling equipment:**
Parco 4200-70 seals are conforming and suitable for repeated use in food-handling equipment, excluding equipment used with milk or edible oils.
- **Wide range of service temperatures:**
Parco 4200-70 seals are suitable for applications ranging from -30 to +225°F.

Typical Values for Compound 4200-70 70-durometer nitrile

Section of Spec.	Physical Property	Requirement ¹	Typical Value	ASTM ² Test Method
	Original Properties			
	Hardness, Shore A	70 ± 5	67	D2240
	Tensile strength, MPa (psi), min.	14(2031)	17(2470)	D412
	Ultimate elongation, pct., min.	250	343	D412
Z1	Modulus at 100 pct., elongation, psi	Report	631	D412
Z2	Specific gravity	Report	1.28	D297
	Heat Aging			
	70 hours at 100°C (212°F)			
Basic	Hardness change, pts., Shore A	±15	2	D573
	Tensile strength change, pct.	±30	11	
	Ultimate elongation change, pct., max.	-50	-9	
	Compression Set			
	22 hours at 100°C (212°F)			
B14	Pct. of original deflection, max.	25	6	D395 Method B
	Fluid Aging, Fuel B			
	70 hours at 23°C (73°F)			
EF21	Hardness change, pts., Shore A	-30 to 0	-17	D471
	Tensile strength change, pct., max.	-60	-37	
	Ultimate elongation change, pct., max.	-60	-41	
	Volume change, pct.	0 to 40	27	
	Fluid Aging, IRM³ 903 Oil			
	70 hours at 100°C (212°F)			
EO34	Hardness change, pts., Shore A	-10 to 5	-3	D471
	Tensile strength change, pct., max.	-45	9	
	Ultimate elongation change, pct., max.	-45	-15	
	Volume change, pct.	0 to 25	6	
	Low Temperature Properties			
Z3	Brittlepoint	Report	-23(-9)	D2137
Z4	TR-10, °C (°F)	Report	-24(-11)	D1329

¹Compound 4200-70 meets the requirements shown above for ASTM D2000 M2BG714 B14 EF21 EO34 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 8021B.

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