High-Performance Seals

Parco 5778 EPDM Seals

Full Line of NSF-61 Seals for Drinking Water Systems

Parco seals made from its internally lubricated, peroxide-cured, ethylene-propylene (EPDM) compounds are tailored to the unique needs of water filtration equipment. Parco's 5778 compounds are available in four hardnesses from 50 to 90 Shore A durometer and are certified to NSF/ANSI Standard 61 ("NSF-61"). The enhanced properties of Parco's 5778 compounds make them ideal for chlorinated or chloraminated water applications. Parco recommends its 5778 compounds for faucets, hose bibs, and other residential plumbing fixtures.

5778 Meets Your Needs

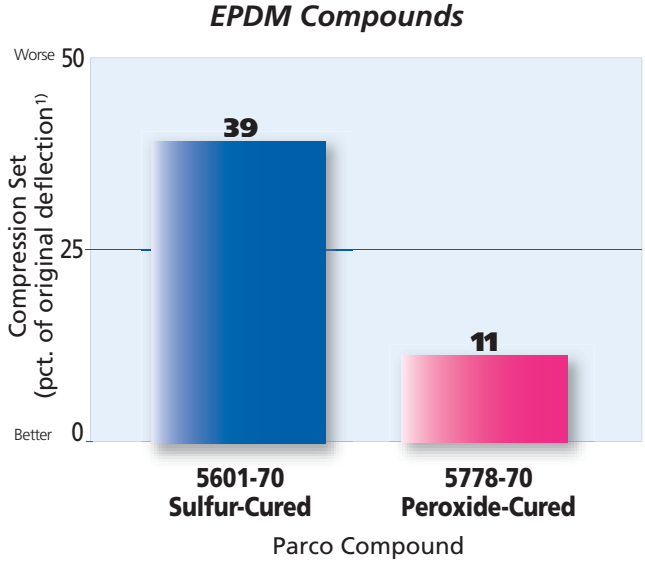
1. Excellent Resistance to Chloraminated Water

In most fluids, elastomers reach a plateau in volume swell after several days of exposure. By contrast, chloraminated water has long-term effects on many commonly used seal materials, causing them to continue swelling even after weeks of immersion. In some cases, there appears to be no limit to the degree of swelling that can occur. Parco's 5778 seals are peroxide-cured, giving them high chemical stability. 5778 seals contain no sulfur, so they are compatible with materials commonly used in plumbing fixtures. The seals experience long-term volume swell of only one percent, making them suitable in chloraminated or chlorinated water.

2. Enhanced Resistance to Compression Set

When installed, seals must resist taking a set from compression. 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 our 5778 EPDM compounds, better maintain their elastomeric properties and original thickness, preserving seal integrity. Seals made form Parco's 5778 compounds provide excellent resistance to compression set at higher temperatures. After testing for 22 hours at 212°F, 5778-70 seals had a compression set of only 11 percent (see Figure 1).

Fig. 1:



[1]Compression set calculated after 22 hours at 100°C (212°F).
Source: Parco Test Report 7991.

5778

Key Features

Parco's 5778 EPDM compounds are designed for chloraminated water applications. Key features include the following:

- **Certified to NSF/ANSI Standard 61:**
  Parco 5778 seals are approved for materials used in drinking water service (listed for maximum exposure of seal material 1.3 in^2/liter of commercial hot water at 180°F; listing includes domestic hot and cold water).
- **Excellent resistance to chloraminated water:**
  Parco 5778 seals had volume swell of only 1 percent after prolonged exposure to chloraminated water.
- **Meets FDA §177.2600:**
  Parco 5778 seals are approved for repeated use in food handling equipment.
- **Excellent wear resistance:**
  Parco 5778 internally lubricated seals held up for more than 750,000 cycles of faucet opening and closing.
- **Wide range of service temperatures:**
  Parco 5778 seals are suitable for applications ranging from -40 to +200°F.

Chemical Resistance

USE WITH	DO NOT USE WITH
Acetone	Automatic Transmission Fluid
Automotive Brake Fluid	Gasoline
Skydrol	Military Aircraft Hydraulic Fluid
Steam	
Water	

Typical Values for Compound 5778
General-purpose EPDM

Physical Property	Compound[1] 5578-50	5778-70	5778-80	5778-90	ASTM[2] Test Method
Original Properties					
Hardness, Shore A	52	69	79	89	D2240
Tensile strength, MPa (psi)	1957	2427	2074	1900	D412
Elongation, pct.	493	312	210	116	D412
Modulus at 100 pct. elongation, psi	210	448	899	1591	D412
Specific gravity	1.08	1.14	1.16	1.29	D297
Compression Set					
22 hours at 100°C (212°F)					
pct. of original deflection, max.	18	11	17	13	D1414
Fluid Aging, Chloraminated Water					
1008 70 hours at 23°C (73°F)					
Volume change, pct.[3]	1	1	1	1	D471
Tension Set					
100 pct. stretch at 23°C (73°F)					
Instantaneous	1	2	3	4	D1414
10 minute hold	2	2	2	3	D1414

[1]Last two digits of compound number identify hardess. [2]ASTM is the acronym for the American Society for Testing and Materials. [3]Volume change determined by accelerated tests consisting of immersion for six weeks at room temperature in water with 300 parts per million (ppm) monochloramine. Solutions were replenished every other day. Monochloramine concentrations in drinking water are typically about 2 ppm.

Source: Parco Test Reports 7620 and 7991.

Parco

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