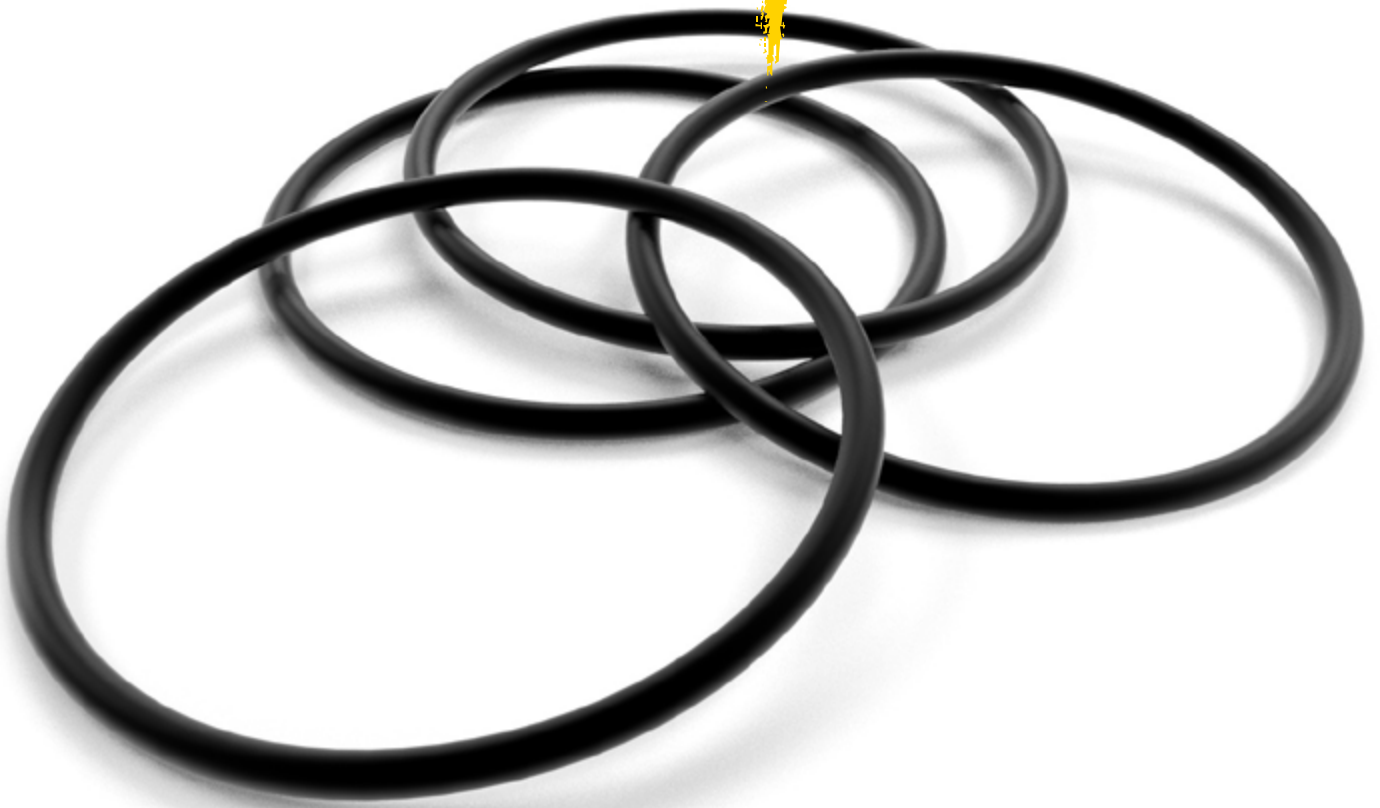


first  **seals™**



Material Datasheet

HPf4s™

Material Datasheet

HPf4s™

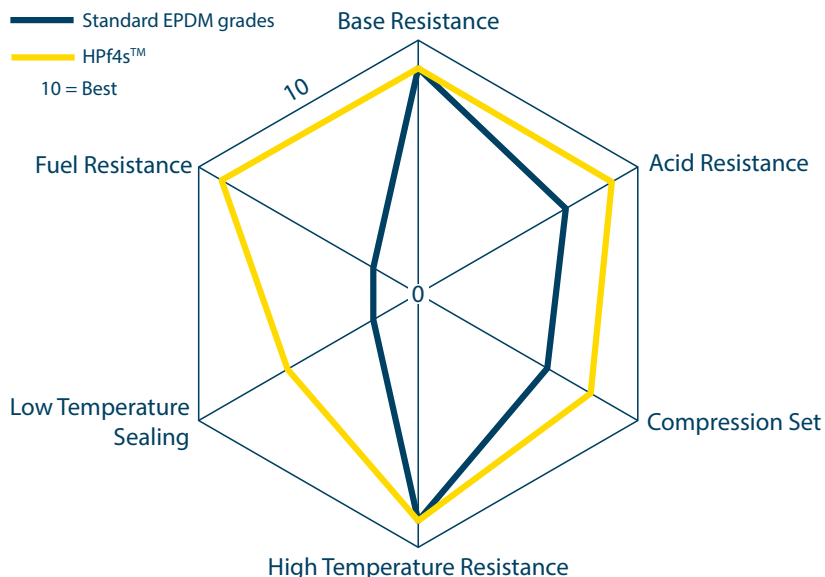


Introduction

HPf4s™ is first4seals™ High Performance fluoro-elastomer. It is available in o’ring and moulded component form for use in the first4seals™ built-to-order Component Seals and Cartridge Seal ranges.

HPf4s™ combines the excellent thermal and chemical resistance of Viton® with the hot water resistance of EPDM. This combination makes it the most cost effective elastomer available on the market, without compromising on performance.

HPf4s™ helps improve sealing performance in the food industry, where clean-in-place processes are used, or in industrial cleaning applications where corrosion inhibitors are present.



Chemical Compatability

Common name	Neoprene	EPDM	Nitrile	Silicone	Fluoro-Silicone	Viton®	Kalrez®	HPf4s™
Lubricating and fuel oils	2	4	1	4	1	1	1	1
Hydraulic oils	2	4	1	2	1	1	1	1
Fireproof hydraulic oils	2	1	3	3	4	4	1	2
Vegetable oils, animal fats	2	2	1	1	1	1	1	1
Gasoline (high octane)	3	4	1	4	1	1	1	1
Kerosene	2	4	1	4	1	1	1	1
Aromatic hydrocarbons	4	4	2	4	2	1	1	1
Aliphatic hydrocarbons	2	4	1	4	2	1	1	1
Alcohols	1	2	1	2	1	1	1	1
Ketones	3	1	4	4	4	4	1	2
Halogenated solvents	4	4	4	4	1	2	2	1
Water (>80°C)	3	1	1	1	1	1	1	1
Concentrated acids	4	4	4	4	3	1-2*	1	2
Diluted acids	2	2	3	4	3	1	1	1
Alkalis	1	1	2	1	2	4	1	1

Quality Assured

In order to ensure the products that are produced from HPf4s™ are of the highest quality they are moulded from a genuine DuPont™ compound in the Group manufacturing facilities.

Typical Industries

- Oil & Gas 
- Chemical 
- Bio/Ethanol 
- Automotive 
- Food & Beverage 

Data has been drawn from tests at DuPont Performance Elastomers facilities and industry sources. Data is presented for use only as a general guide and should not be the basis for design decisions. (1 = Excellent, 2 = Good, 3 = Fair, 4 = Not recommended). *Rating is type dependent

Material Datasheet

HPf4s™



Material Specification

- **Material Composition**

- HPf4s™ compound : 71%
- Carbon / Other ingredients: 29%

- **Original Physical Properties**

- Operating Temperature : -20 to 200°C (-5 to 400°F)
- Hardness (ASTM D2240) : 70 ± 5 Shore A
- Tensile Strength (ASTM D412) : 14.0 Mpa (2030 PSI)
- Elongation (ASTM D412) : 180%
- Specific Gravity (ASTM D1817) : 1.84 ±0.03
- Compression Set (ASTM D395) : 32% Max

- **Heat Resistance @ 250°C (482°F) for 70 hours (ASTM D573)**

- Change in Weight : - 1.395%
- Change in Hardness : +2 Shore A
- Change in Tensile Strength : +3.85%
- Change in Elongation : +40%

- **Oil Resistance in ASTM No. 3 Oil @ 150°C (302°F) for 70 hours (ASTM D471)**

- Change in Volume : + 1.0445%
- Change in Hardness : -1 Shore A
- Change in Tensile Strength : -7.96 %
- Change in Elongation : -10.00%

- **Certification (proof available on request)**

- FDA & EC1935/2004 Compliance: US regulation 21CFR177.2600

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