

Tecnoflon® PFR 75-BX2

Perfluoroelastomer Compound

Tecnoflon® PFR 75-BX2 is a 75 Shore A black, high temperature perfluoroelastomer (FFKM) compound based on Tecnoflon® PFR 95HT. It provides a significantly wider operational range and superior compression set resistance than any other perfluoroelastomer. With an upper temperature limit of 300°C, it's the elastomer of choice for the most demanding service conditions.

Thanks to its unique curing chemistry, it offers a very broad chemical resistance in a wide variety of media including acids, caustics, ketones, aldehydes, esters, ethers, methanol, solvents, sour gases, amines, hydrocarbons, steam, hot water and mixed process streams. It also exhibits excellent steam resistance up to 300°C.

Tecnoflon® PFR 75-BX2 can be transformed into virtually any kind of elastomeric sealing element such as O-rings, gaskets, valve bodies, butterfly valves, pump housings and stators, metal bonded parts, diaphragms, profiles, etc.

These sealing elements can be used in mechanical seals, pumps, compressors, valves, reactors, mixers, sprayers, dispensers, quick-connect couplings, controls, instrumentation, etc. in the chemical and petrochemical industry, hydrocarbon processing, petroleum exploration and extraction, food processing, the pharmaceutical and bio-analytical industry, the aerospace and semiconductor manufacturing industries.

Handling and safety

Normal care and precautions should be taken to avoid skin contact, eye contact and inhaling of fumes. Smoking is prohibited in working areas. Wash hands before eating or smoking. For complete health and safety information, please refer to the material safety data sheet.

Basic characteristics of the compound are as follows:

Property	Typical Value	Unit	Test Method
ML (1+10') at 121 °C	110		
Specific gravity	2.00	g/cm ³	ASTM D792
Color	Black		
Packaging/form	1 kg / Slabs		

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Typical rheological and physical properties

Property	Typical Value	Unit	Test Method
MDR 12 min at 170 °C arc 0.5°			
ML	2.6	lb·in	ASTM D6601
MH	23.9	lb·in	
t _{s2}	49	s	
t' ₅₀	105	s	
t' ₉₀	307	s	

Mechanical Properties	Typical Value	Unit	Test Method
Press cure: 10 min at 170 °C, post cure: (8+16) h at 250 °C			
100% modulus	11.3	MPa	ASTM D412C
Tensile strength	18.5	MPa	
Elongation at break	175	%	
Hardness	76	Shore A	ASTM D2240
Compression set, 25% deformation			
#214 O-ring, 70h at 200 °C	20	%	ASTM D 395 Method B
#214 O-ring, 70h at 300 °C	46	%	ASTM D 395 Method B

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Chemical resistance overview

	Volume Swelling
Inorganic acids	10 – 30 %
Organic acids	10 – 30 %
Alkalis	10 – 30 %
Amines (RT)	< 10 %
Hot amines (> 70 °C)	30 – 50 %
Water / Steam	< 10 %
Ketones	< 10 %
Esters	< 10 %
Ethers	< 10 %
Aldehydes	< 10 %
Alcohols	< 10 %
Hydrocarbons	< 10 %
Sour gas	< 10 %
Lubricants	< 10 %

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