VP309-80 and VP316-90

Base Resistant Fluorocarbon (FKM)

Innovative Elastomeric Technology for Critical Environments

Finding a material which is resistant to a broad range of fluids, offers decent low temperature flexibility, and is cost effective, can be one of the most common challenges found in the Oil and Gas industry today. Parker's Base Resistant Fluorocarbon (BRE-FKM) compounds, VP309-80 and VP316-90, are technologies that are able to withstand exposure to hydrocarbons, acids, solvents, high temperature water, completion brines, control fluids and amines while exhibiting better low temperature flexibility than AFLAS™ at a price point under Perfluoroelastomer. This excellent balance of characteristics paired with Parker's ability to manufacture into various form factors such as O-rings, custom molded shapes, packer elements and bonded parts, makes Parker's VP309-80 and VP316-90 an ideal solution to Oil and Gas sealing challenges.

Contact Information:

Parker Hannifin Corporation
O-Ring & Engineered Seals Division
2360 Palumbo Drive
Lexington, KY 40509

phone 859 269 2351
oesmailbox@parker.com

www.parkerorings.com
www.parker.com/oes

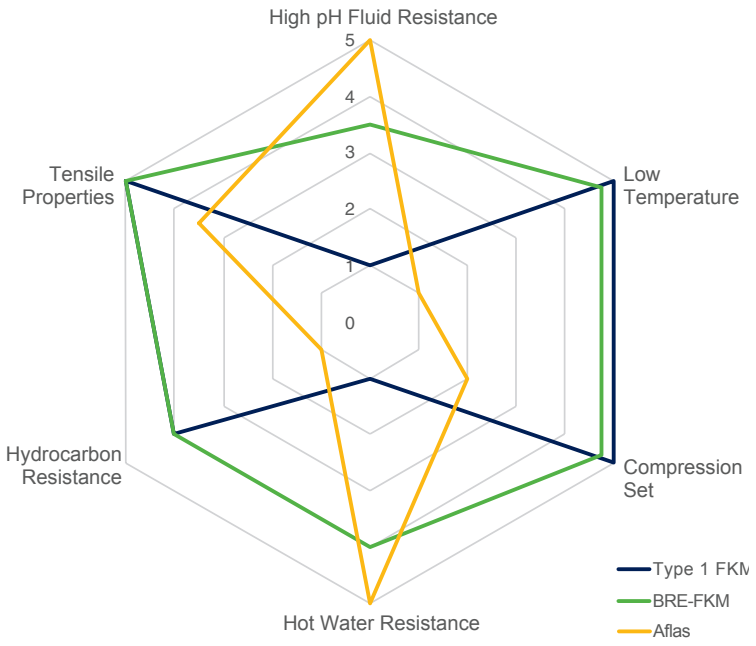
Product Features:

- 80 and 90 Shore A hardness
- Operating Temperature Range from -10°F to 400°F
- Very Good Compression Set Resistance
- Sour Gas Resistant (up to 20% H_2S per NACE TM0187)
- RGD Resistant per ISO 23936-2
- Broad range of chemical resistance (High pH fluids, amines, completion brines, acids, and hydrocarbons)

ENGINEERING YOUR SUCCESS.

Specifications

Property	Test Method	VP309-80	VP316-90
Original Physical Properties			
Hardness, Shore A, pts	ASTM D2240	85	92
Tensile Strength, psi	ASTM D1414	3371	2624
Ultimate Elongation, %	ASTM D1414	284	160
Modulus at 50% Elongation, psi	ASTM D1414	651	1274
Modulus at 100% Elongation, psi	ASTM D1414	1215	2019
Specific Gravity	ASTM D297	1.74	1.64
Tear Strength, Die C, ppi	ASTM D624	226	248
Tg, °C	ASTM D7426	-14	-14
Compression Set			
70 hrs. @ 392°F	ASTM D395	11	15
168 hrs. @ 392°F	Method B	16	23
Fluid Immersion, Distilled Water, 168 hrs. @ 392°F			
Hardness Change, Shore A, pts.	ASTM D471		-1
Volume Change, %			+8
Fluid Immersion, Steam, 168 hrs. @ 392°F			
Hardness Change, Shore A, pts.	ASTM D471		+2
Volume Change, %			-1
Fluid Immersion, No. 2 Diesel, 168 hrs. @ 302°F			
Hardness Change, Shore A, pts.	ASTM D471		0
Volume Change, %			+5
Fluid Immersion, IRM 903, 168 hrs. @ 302°F			
Hardness Change, Shore A, pts.	ASTM D471		0
Volume Change, %			+3
Fluid Immersion, 11.5 ppg NaBr (pH = 9.5), 168 hrs. @ 347°F			
Hardness Change, Shore A, pts.	ASTM D471		0
Volume Change, %			0
Fluid Immersion, 95% Methanol, 168 hrs. @ 73°F			
Hardness Change, Shore A, pts.	ASTM D471		-4
Volume Change, %			+6



WARNING:

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THESE PRODUCTS CAN CAUSE EQUIPMENT FAILURE OR DAMAGE, PERSONAL INJURY OR DEATH.

For safe and trouble-free use of these products, it is important that you read and follow the Parker Seal Group Product Safety Guide. This Safety Guide can be referenced and downloaded free of charge at www.parkerseals.com. It is also printed in major Seal Group product catalogs, and can be ordered by telephone without charge as Parker Publication No. PSG 5004 by calling 1-800-C-PARKER.

Parker

ENGINEERING YOUR SUCCESS.