VX165-90

Extreme Low Temperature FKM

Meeting the Industry Need for -65° F Sealing:

Facing the demanding requirements of the Oil and Gas industry, VX165-90 delivers not only extreme low temperature performance needed in arctic environments but also great high temperature stability and low compression set values. Along with great physical properties, chemical compatibility, rapid gas decompression and sour service (H_2S) resistance, VX165-90 significantly extends seal life in applications where a variety of other materials have been used. These characteristics make VX165-90 the ideal material when looking for great all around properties from an FKM.

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Product Features:

- Wide Temperature Range: -65°F to 400°F (-54°C to 204°C)
- Excellent Compression Set Resistance
- Extreme Low Temperature Performance
- 90 Shore A Durometer
- RGD Resistant
- H_2S Resistant per ISO 23936-2

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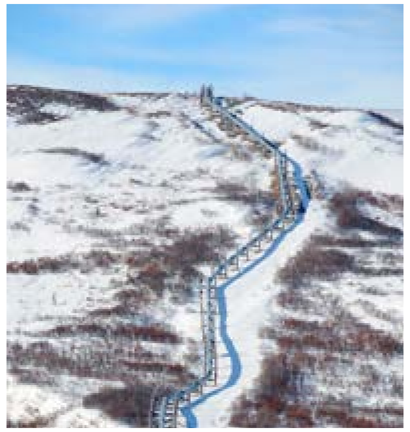
VX165-90 Test Data

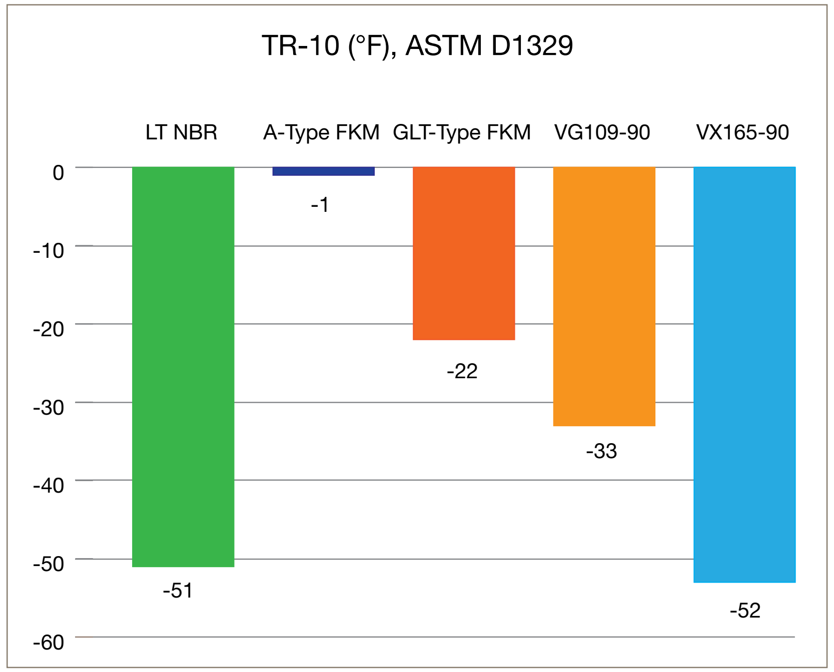


Extreme Low Temperature

Traditionally, FKM compounds are known for great thermal stability at high temperatures. The VX165-90 is no different with very minimal change in physical properties and low compression set values at 392°F (200°C). However, what sets VX165-90 apart from the competition is the ability to perform at extremely low temperatures as well. With a TR-10 value of -52°F (-47°C) the VX165-90 compound is reliable for static sealing needs down to -65°F (-55°C) which is nearly 50°F lower than standard A-Type FKM.

Excellent Chemical Resistance

As expected from the FKM class of elastomers, VX165-90 maintains excellent compatibility with typical fluids and media seen in Oil and Gas environments. Offering excellent resistance to petroleum oils and hydrocarbons as well as improved resistance to more aggressive media like hydrogen sulfide (H_2S) and Methanol make the VX165-90 useful in a broad spectrum of applications.



Rapid Gas Decompression

Applications which utilize high pressure gas venting techniques exposing the elastomeric component to high pressure then low pressure over a short period of time is very aggressive. Rapid Gas Decompression (RGD) resistance can be a root cause of severe damage to elastomers in application causing leakage. RGD damage is caused by the release of high pressure gases tearing their way out of an elastomeric component resulting in internal voids, fissures, blisters and splits of the seal. The VX165-90 compound can withstand these rapid decreases in pressure without significant damage to the seal providing long service life in the application.

VX165-90

AS568-214 Test Data

Property	VX165-90
Original Physical Properties, ASTM D2240, D1414	
Hardness, Shore A pts.	91
Tensile Strength, psi	2367
Ultimate Elongation, %	100
Modulus at 50% Elongation, psi	1402
Modulus at 100% Elongation , psi	2262
Tear Strength, Die B, kN/m	31
Tear Strength, Die C, kN/m	26
Low Temperature Retraction, ASTM D1329	
TR-10, °F (°C)	-52°F (-47°C)
Compression Set, ASTM D395 Method B	
70 hrs. @ 392°F (200°C), % of original deflection	13
168 hrs. @ 392°F (200°C), % of original deflection	19
Fluid Immersion, Diesel #2, 70 hrs. @ 212°F (100°C), ASTM D471	
Hardness Change, Shore a pts.	-2
Tensile Change, %, max	-26
Elongation Change, %, max	+1
Modulus at 50% Elongation Change, %	-19
Modulus at 100% Elongation Change, %	-23
Volume Change, %	+4
Fluid Immersion, Methanol, 70 hrs. @ 75°F (23.9°C), ASTM D471	
Hardness Change, Shore A pts.	-5
Tensile Strength Change, %	-36
Ultimate Elongation Change, %	-3
Modulus at 50% Elongation Change, %	-29
Modulus at 100% Elongation Change, %	-32
Volume Change, %	+7
Fluid Immersion, Zinc Bromide, 70 hrs. @ 212°F (100°C), ASTM D471	
Hardness Change, Shore A pts.	+1
Tensile Change, %	+1
Elongation Change, %	-1
Modulus at 50% Elongation Change, %	+3
Modulus at 100% Elongation Change, %	+5
Volume Change, %	0

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.

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