



V717 Fluorocarbon

Defying the Freeze at -60°C

At Hi-Tech Seals, we understand that elastomeric seal components encounter a unique set of [challenges](#) in cold temperatures. In such conditions, elastomer seals can leak or fail due to reduced flexibility, increased brittleness, diminished rebound, and a multitude of other property changes.

While fluorocarbon (FKM) is a widely used material, it usually underperforms in colder climates. To provide our customers with low-temperature FKM sealing solutions, we have formulated a specialty compound, V717, using Viton™ GLT polymer. This compound benefits our customers from FKM's high-temperature capabilities while offering improved low-temperature flexibility.

V717 exhibits remarkable resilience to a broad range of chemicals, including against hot water and steam. Its low compression set makes it ideal for temperature and pressure cycling environments. It has a proven track record for delivering outstanding sealing performance in some of the most demanding downhole applications.

V717 has undergone third-party testing for low-temperature valve sealing performance. The compound has achieved an outstanding result at a temperature of -60°C, per the standards of MESC SPE 77/312 for Fugitive Emission Production Testing

V717 Advantages:

- General temperature range -60° to 200°C
- Low gas permeability
- Outstanding mechanical properties
- Exceptional resistance to petroleum, oil, and gas
- Great resistance in corrosive environments
- Superior performance in pressure and temperature cycling applications
- Resistant to a broad range of chemicals, including against hot water and steam.

V717 is used in critical applications across numerous markets, including:

- Drilling
- Completions
- Pumps
- Workovers
- Compressors
- Valves

Original Physical Properties	Standards	Values*
Hardness, Shore A	D2240	74
Tensile Strength, psi (MPa)	D412	2637 (18.19)
Elongation, %	D412	271
Modulus @ 100%, psi (MPa)	D412	646 (4.46)
Specific Gravity, g/cm ³	-	1.84
Compression Set, 22 hrs @ 200°C, %	D395 Method B	17.6
Low Temperature Brittleness Test, 3 min @ -40°C	D2137 Method C	Pass
Low Temperature Retraction Test, (TR-10), °C	D1329	-30
Low Temperature Valve Testing, °C	MESC SPE 77/312	-60



Our V717 is ideal for O-rings and custom moulded sealing products.

For more information on this and other Hi-Tech Seals compounds, contact us at engineering@hitechseals.com.

Looking for a compound that excels in low temperatures and offers superior resistance to Rapid Gas Decompression? See our [V9M2](#) fluorocarbon compound for details.

**This information is correct based on our knowledge at the date of its publication. The temperature range listed is a general guideline, and final suitability will depend on various application conditions. To ensure this material meets customers' final requirements and safety demands, we recommend customers conduct their own testing.*