



# V75ZF



## Fluorosurfactant-free, high fluorine FKM for low temperature sealing applications

V75ZF is a fluorosurfactant-free alternative to V75Z, a PPE grade recommended for use in static or dynamic applications where low temperature performance is required alongside improved fluid resistance.

V75ZF uses a fluorosurfactant-free version of the polymer used in V75Z. The two materials are otherwise compounded and processed identically.

Testing has been carried out that shows, as detailed below, strong alignment between the original and NFS (non-fluorosurfactant) versions from a thermal and mechanical perspective.

Material Properties	Method	V75Z	V75ZF
Hardness (Shore A)	ASTM D412	72	72
Hardness (IRHD)	ASTM D1415	80	80
Density (g/cm <sup>3</sup> )	ASTM D792	1.86	1.85
Tensile Strength (MPa)	ASTM D412	18.5	18.5
Elongation at Break (%)		190%	180%
Modulus @ 50% (MPa)		2.9	3.0
Modulus @ 100% (MPa)		7.5	7.8
Compression Set (72h @ 200°C / 392°F)	ASTM D395 Method B	19%	17%
Compression Set (72h @ 200°C / 392°F)	ISO 815 Method B	30%	28%
Compression Set (72h @ 200°C / 392°F)	ISO 815 Method C	18%	16%

*Table comparing typical properties of original material against new NFS version*

### Thermal Performance: (Low Temperature)

Low temperature flexibility has been compared using the midpoint Glass Transition Temperature (T<sub>g</sub>) obtained through Differential Scanning Calorimetry (DSC) ASTM D3148.

The results show a high degree of correlation between the original and NFS materials.

Material Grade	Glass Transition Temperature (°C)
V75Z	-23.4°C / -10.1°F
V75ZF	-23.9°C / -11°F

*DSC: Comparable Glass Transition Temperature*



V75ZF is part of PPE's range of fluorosurfactant-free fluoroelastomer materials. It has been developed to be more environmentally sustainable.

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