



PureFab® VPF20

**FLUROSURFACTANT-FREE FLUOROELASTOMER FOR
ADVANCED SEMICONDUCTOR AND DISPLAY APPLICATIONS**



PureFab® VPF20 is a high-purity FKM manufactured without fluorosurfactants, lowering its environmental impact. It is specifically designed for contamination-free production in semiconductor and flat panel display manufacturing where purity is critical.

Our next-generation fluoroelastomer (FKM), PureFab® VPF20, is developed using a non-fluorosurfactant base polymer combined with a high-purity synthetic filler system. It is specially engineered to meet the demanding requirements of semiconductor and flat panel display manufacturing.

The material offers robust performance when exposed to aggressive chemicals, vacuum conditions and elevated temperatures. Its carefully optimized formulation ensures long-term durability and helps to improve environmental sustainability by eliminating fluorosurfactants from the polymerization process.

PureFab® VPF20 bridges the gap between conventional FKMs and ultra-high-performance FFKMs with improved mechanical strength, reliable sealing performance, excellent elastic recovery and low levels of outgassing and extractables, essential for contamination-sensitive process environments. It is the ideal choice for semiconductor processes where standard FKM materials fall short, but a full FFKM solution is not required.

Features and Benefits

- Fluorosurfactant-free manufacturing for reduced environmental impact
- High-purity FKM formulation with synthetic fillers to reduce metallic contaminants and ionic extractables
- Superior mechanical strength and elastic recovery for enhanced durability compared to standard FKMs in both static and dynamic sealing applications
- Excellent chemical compatibility with common semiconductor process chemistries
- Cost-efficient alternative to FFKM for moderate-temperature, medium-chemical-duty applications

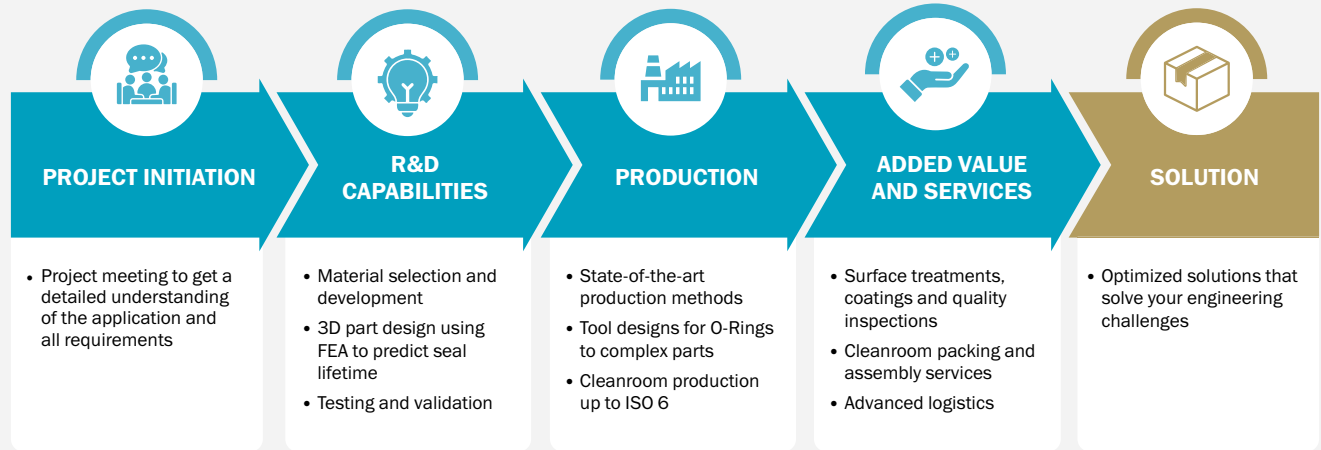
Application Examples

- Seals in transfer modules, load locks, Equipment Front End Module (EFEM) and vacuum handling systems, as well as general purpose vacuum seals
- Flat panel display manufacturing equipment
- Purity-critical applications where standard black FKMs risk contamination

General Data		PureFab® VPF20
Elastomer Type		FKM
Color		Gray

Properties	Test Method	Results
Hardness (Shore A)	ASTM D2240	78
Tensile Strength (MPa)	ASTM D1414	26.2
Elongation at Break (%)	ASTM D1414	316
Modulus 100% (MPa)	ASTM D1414	5.1
Compression Set (%) 72h @ +200 °C/+392 °F	ASTM D395	24
Continuous Service Temperature		-5 °C to +220 °C/+14 °F to +428 °F

TOGETHER WE DEVELOP YOUR POLYMER SOLUTION



Partner with Trelleborg to benefit from local specialist support, global reach and dedicated regional semiconductor experts. These three pillars ensure best in class service levels, from design, prototyping and delivery through to serial production.

For more information and contact details visit: www.trelleborg.com/seals

The information in this publication is intended for general reference only and not for specific applications. Customers must satisfy themselves with the suitability of a product and material for their individual applications.

Color variations, including dark spots, are a normal result of the polymer curing process and do not indicate the presence of foreign matter or negatively impact performance, reliability or cleanliness.

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