VICTREX CT™ 200 Cryogenic Polymer (Kel F PCTFE Replacement in Dynamic Sealing Applications)

COMPLIANCE INFO

(/Compliance/Prop-65) (/Compliance#ROHS) (/Compliance#REACH)

(/Compliance/Conflict-Minerals)

General Info

VICTREX CT™ 200 is a High-performance thermoplastic polymer suitable for dynamic sealing applications at very low temperatures. It also offers a lower static and dynamic coefficient of friction which helps minimize torque and wear, allowing smaller actuators and saving space and weight.

VICTREX CT™ 200 can replace Kel F PCTFE in many sealing applications in cryogenic applications with improved strength, thermal conductivity, superior dimensional stability, and lower coefficient of friction.

Key Benefits:

Higher tensile strength than PCTFE coupled with a lower modulus confirms more ductility across a wider range of temperatures; testing at (-320 F / -196 C to 302 F /150 C) indicates better sealing capabilities than PCTFE which would also extend to higher temperatures in the range of 392 F /200 C.

Improved dimensional stability with a Lower and constant coefficient of thermal expansion ensures more dimensional stability and minimizes the shrinkage at low temperatures.

Higher thermal conductivity permits a faster reaction to temperature changes allowing the seat seal to keep interference with the steel counter-surface at all times – contributing to more consistent sealing.

Key Properties

- Excellent Chemical Resistance
- High Strength
- Provides a lower static and dynamic coefficient of friction which helps minimizing torque and wear allowing smaller actuators and saving space and weight.
- Formulated for Cryogenic Dynamic Sealing Applications
- Higher Tensile Strength than PCTFE coupled with lower modulus confirms more ductility across a wider range of temperatures; testing at (-320 F / -196 C to 302 F /150 C) indicates better sealing capabilities than PCTFE which would also extend to higher temperatures in the range of 392 F /200 C.
- Lower and constant coefficient of thermal expansion ensures more dimensional stability and minimizes low temperature shrinkage.
- Higher thermal conductivity permits a faster reaction to temperature changes allowing the seal to keep interference with the steel counter-surface at all times contributing to a more consistent seal.

Limitations

Applications

- Dynamic Sealing Applications
- Pump and Valve Seals
- Turbine Seals
- Cryogenic (Low Temperature) Sealing Applications

Resin Trade Names

- VICTREX CT™ 200

Manufacturer Trade Names

- VICTREX CT™ 200

Available Sizes

Extruded Sheet*

Extruded Rod*

Injection Molded Tubes*

*Minimums and Longer Lead-Times may apply depending on size and quantity requested.

Contact us for availability

Available Colors

- Green

Typical Properties of VICTREX CT™ 200 Cryogenic Polymer (Kel F PCTFE Replacement in Dynamic Sealing Applications)

DETAIL

Description	Value
Material Type	Semi-Crystalline Thermoplastic
Chemical Name	Proprietary
Trade Name	VICTREX CT™ 200
Color	Green

PHYSICAL

Property	Test	Unit of Measure	Value
Density	ISO 1183	g/cm³	1.4
	ISO 1183	lb/in³	0.051

MECHANICAL

Property	Test	Unit of Measure	Value
Tensile Strength	ISO 527	psi	10877
Tensile Elongation at Break	ISO 527	%	40
Flexural Strength	ISO 178	psi	18854
Flexural Modulus	ISO 178	psi	478624
Compressive Strength	ISO 604	psi	20000
Compressive Modulus	ISO 604	psi	500000
Hardness	ISO 868	Shore D	80 Shore D
IZOD Impact-Notched	ISO 180/A	ft-lb/in	4.28

THERMAL

DETAIL

Property	Test	Unit of Measure	Value
Coefficient of Linear Thermal Expansion	ISO 11359	x 10-5 in./in./°F	3
Max Continuous Operating Temp		°C	249
		°F	480
Minimum Operating Temp		°C	-196
		°F	-320
Thermal Conductivity		BTU-in/ft²-hr-°F	1.73