

Perlast® ICE G75LT

Low temperature perfluoroelastomer



Description

Perlast® ICE G75LT offers a unique combination of excellent chemical resistance and low temperature performance. This perfluoroelastomer has been specifically developed to perform under extreme conditions, in temperatures as low as -46°C (-51°F).

Perlast® ICE G75LT has been formulated to provide increased resistance to a broad range of chemicals by carefully controlling the molecular architecture. In addition, this perfluoroelastomer has low permeability and as a result, it is less prone to swelling, leading to extended in-service performance in valves, pumps and mechanical seals.

Ideal for use in exploration and completion applications and equipment operating or stored in sub-zero conditions. Perlast® ICE G75LT is suitable for both dynamic and static applications and can be fully moulded into O-rings (any size up to 2.5m/8ft internal diameter) and custom shapes.

Key Attributes

- ▶ Excellent low-temperature sealing capability
- ▶ Good high temperature resistance
- ▶ Low compression set
- ▶ Excellent chemical resistance to a broad range of chemicals
- ▶ Exceptional acid and amine resistance
- ▶ Good mechanical properties

Typical Applications

- Aerospace** – Static O-rings
- Chemical Processing** – Pumps & Valves
Mechanical seals
Downstream refinery & petrochem equipment
Cryogenic equipment
Gas storage & transportation
- Oil & Gas** – Subsea equipment
Completion tools
Drilling tools (deepwater)
Pipe connectors
Pumps, Valves & Compressors

Other materials in this range

- Perlast® G90LT (low temperature, ED resistant FFKM grade)
Perlast® G92E (ED resistant FFKM grade)



Typical Material Properties

Property	Test method	Value	
Material Type	ASTM D1418	FFKM	
Colour		Black	
Hardness (Shore A)	ASTM D2240	78	
Tensile Strength (MPa)	ASTM D412	11.0	
Elongation at break (%)	ASTM D412	160	
50% Modulus (MPa)	ASTM D412	4.5	
100% Modulus (MPa)		8.5	
Compression Set (%): 70 h @ 200°C (392°F) 672 h @ 200°C (392°F)	ASTM D395B	17 45	
Glass Transition: Tg		D3418	-33°C (-27°F)
	TR10	D1329	-32°C (-26°F)
Minimum Operating Temperature		-46°C (-51°F)	
Maximum Operating Temperature	*	+275°C (+527°F)	
Continuous Use Temperature	**	+210°C (+410°F)	

* and ** PPE proprietary test methods

SPECIAL NOTE: This information is to the best of our knowledge accurate and reliable. However, PPE Ltd makes no warranty, expressed or implied that parts manufactured from this material will perform satisfactorily in the customer's application. It is the customer's responsibility to evaluate parts prior to use, especially in applications where their failure may result in injury and/or damage. It should also be noted that all elastomeric parts have a finite life, therefore a regular program of inspection and replacement is strongly recommended. In non-black grades of elastomer, it is possible to observe slight variations in colour. This is normal and is inherent in the part; it is not indicative of foreign matter. These colour variations are not expected to adversely affect the performance of the part.
The material properties above should not be used for specification purposes.

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