

Perlast® G75H

High temperature perfluoroelastomer for Semiconductor applications

PERLAST®

Description

Perlast® G75H incorporates a novel reinforcement system which produces a synthetically clean compound formulated for minimum particle generation combined with excellent resistance to aggressive oxygen and fluorine based plasmas.

Specially developed for Plasma and Gas Deposition applications including ashing, etching, HDPCVD, PECVD, SACVD.

Particularly suited for use in applications which require exposure to temperatures of up to 320°C (608°F) combined with excellent mechanical properties.

Key Attributes

- ▶ Excellent plasma resistance
- ▶ High temperature stability
- ▶ Wide chemical resistance
- ▶ Low out-gassing properties making it ideal for vacuum applications
- ▶ Ultra low metal ion content
- ▶ Low coefficient of thermal expansion
- ▶ Outstanding physical properties make G75H ideal for dynamic applications.

Typical Applications

Developed for use in the semiconductor industry. Suitable for use in wet and dry semiconductor processes including:-

- ▶ Lithography
- ▶ PVD
- ▶ LPCVD, HDPCVD, PECVD, SACVD
- ▶ Etching
- ▶ Stripping
- ▶ Cleaning

Dynamic seals - Bonded Gate Valves & Isolation Valves
Pendulum Valves
Slit Valves

Static seals - Chamber O-rings
Gas inlet seals
Gas feed-through seals
Chamber lid seals etc
NW/KF fittings

Other components - Ceramics
Quartz
Sapphire

Other materials in this range

Perlast® G67P (translucent)
Perlast® G74P (translucent)
Perlast® G75TX (black high temperature grade 327°C/620°F)

*For extended operation at high temperature please consult the PPE technical team.



Typical Material Properties

Property	ASTM	ISO	Value
Material Type	FFKM	FFPM	
Colour			Off-White
Hardness: (°IRHD)	D1415	ISO48	74
	(Shore A) D2240		80
Tensile Strength (MPa)	D412	ISO37	18.1
Elongation at break (%)	D412	ISO37	220
100% Modulus (MPa)	D412	ISO37	9.0
Compression Set: 72 hrs @ 200°C (392°F)	D395	ISO815	18
Minimum Operating Temperature			-15°C (+5°F)
Maximum Operating Temperature*			+320°C (+608°F)
Coefficient of Thermal Expansion (°C ⁻¹)			3.0x10 ⁻⁴

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 to be used for specification purposes.

Perlast® is a registered trademark of Precision Polymer Engineering Limited.



© Copyright Precision Polymer Engineering Ltd | Issue 2, Revision 1

www.prepol.com | Europe: +44 (0) 1254 295400 | USA: +1 408 441 2043 | Asia: +81 804 354 2781 | Email: prepol.sales@idexcorp.com