Product Data Sheet

Perlast® Helios G7HA

High temperature perfluoroelastomer for semiconductor applications

PERLAST® HELIOS

Description

Perlast® Helios G7HA is a perfluoroelastomer grade which has been specifically designed for high temperature applications in semiconductor processes.

Perlast® Helios G7HA offers outstanding sealing performance over 300°C, and has excellent overall plasma resistance – especially against high concentrations of fluorine radical plasmas. This grade ensures no trade-off between high temperature performance and high purity, with a fully organic formulation offering extremely low trace metal levels for higher yields and reduced process contamination.

Perlast® Helios G7HA combines outstanding long term mechanical performance, excellent plasma resistance and ultra-high purity, which can help to significantly reduce operational downtime and cost of ownership.

Key Attributes

- Excellent high temperature sealing performance
- Excellent plasma resistance
- Excellent chemical resistance
- Low out-gassing properties, making it ideal for vacuum applications
- Ultra-low trace metal content
- Very low particle generation

Typical Applications

Developed for use in various semiconductor applications. Suitable for use in wet and dry semiconductor processes including:

- Etching
- Stripping
- Cleaning
- PVD
- LPCVD, HDPCVD, PECVD, SACVD, ALD

Typical Material Properties

Property	ASTM	ISO	Value
Material Type	FFKM	FFPM	
Colour			Brown
Hardness: (°IRHD) (Shore A)	D1415 D2240	ISO48	66 69
Tensile Strength (MPa)	D412	ISO37	12.7
Elongation at break (%)	D412	ISO37	230
100% Modulus (MPa)	D412	ISO37	4.2
Compression Set (%): 72 hrs @ 200°C (392°F) 72 hrs @ 300°C (572°F)	D395	ISO815	 20 51
Minimum Operating Temperature			-15°C (+5°F)
Maximum Operating Temperature			+310°C (+590°F)

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 effect the performance of the part.*
The material properties above should not to be used for specification purposes.