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
- Etchina
- 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

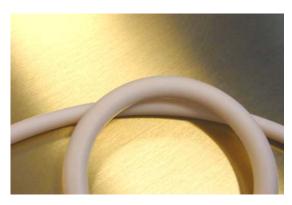
Sapphire

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: | D395 | ISO815 | 18 |
| 72 hrs @ 200°C (392°F) | | | |
| 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 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.

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



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