Product Data Sheet

Nanofluor® Y75G

An ultra-pure fluoroelastomer with excellent plasma resistance

Nanofluor®

Description

Nanofluor® Y75G is a highly fluorinated elastomer which incorporates relatively low levels of an advanced nanoparticle type filler system, producing a clean compound formulated for minimum particle generation, combined with excellent resistance to aggressive oxygen and fluorine based plasmas. The material has been formulated to be used in critical locations where the seal can be directly exposed to the chemical environment.

Key Attributes

- Good all round chemical and temperature resistance
- Outstanding oxygen and fluorine plasma resistance
- Good mechanical properties
- Very low trace metal content
- Low out-gassing properties making it ideal for vacuum applications
- Low particle generation

Typical Applications

Developed for use in several typical semiconductor process applications. Suitable for use in wet and dry semiconductor processes including:

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

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

Nanofluor® Y75N

Typical Material Properties

Property	ASTM	ISO	Value
Material Type	Advanced Fluoropolymer		
Colour			Grey
Hardness: (°IRHD) (Shore A)	D1415 D2240	ISO48	73 70
Tensile Strength (MPa)	D412	ISO37	24.5
Elongation at break (%)	D412	ISO37	235
100% Modulus (MPa)	D412	ISO37	4.0
Compression Set (%): 72 hrs @ 200°C (392°F)	D395	ISO815	18
Minimum Operating Temperature			-15°C (+5°F)
Maximum Operating Temperature			+260°C (+500°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.