

Fusion™ 706

High-Purity Fluoroelastomer

Fusion™ 706 is a low-durometer, high-purity fluoroelastomer, developed for a wide range of semiconductor processing sealing applications. Special engineering applications requiring low sealing force materials, such as bonded slit valve gates, are well suited for Fusion™ 706.

Recommended for use in a range of plasma equipment applications, from etch and plasma enhanced CVD to plasma ashing applications, Fusion™ 706 is ideal for sealing devices that must accommodate tolerance stack-up conditions.

Fusion™ 706 offers very low-metallic ion levels and good resistance to today's advanced process chemistries. Contact Greene Tweed's Semiconductor engineering and sales experts for specific application recommendations.



Typical Properties	
Physical Properties	Typical
Color	Translucent Amber
Polymer Type	Fluoroelastomer
Specific Gravity	1.88
Hardness, Shore A*	61
Mechanical	
Tensile Strength, psi (kPa)	1851 (12762)
Elongation, %	334
Tensile Modulus, psi (kPa)	
Modulus @ 50% Elongation	136 (938)
Modulus @ 100% Elongation	205 (1413)
Compression Set: 70 Hours @ 204°C @ 25% Deflection, %	24
Thermal	
Service Temperature Range	-20°F to 428°F (-29°C to 220°C)

Not to be used for specification purposes.

Unless otherwise indicated, all tests are performed on AS 568A (-214) o-rings.

* Test performed on button samples.

Features and Benefits

- Good plasma resistance
- Soft material for low sealing forces and tolerance stack-ups
- High-purity, low-metallic ion content
- Low cost

Applications

- Bonded slit valve gates
- Chamber seals
- Window seals
- Filter seals
- Gas inlet seals
- Lid seals
- Door seals
- Valve seals

Recommended Process Applications

- Deposition
- Dry plasma etch
- Dry ashing
- Oxidation
- Diffusion
- Metalization
- Wet benches
- Wet/chemical applications

Note: Color variations and dark spots that might be observed in Fusion™ parts are considered cosmetic and an inherent result of the polymer curing process. They are not foreign matter and not anticipated to adversely affect the performance of the part in service. Please contact a Greene Tweed applications engineer for additional information.

Contact Us

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09/18-GT DS-US-SC-149