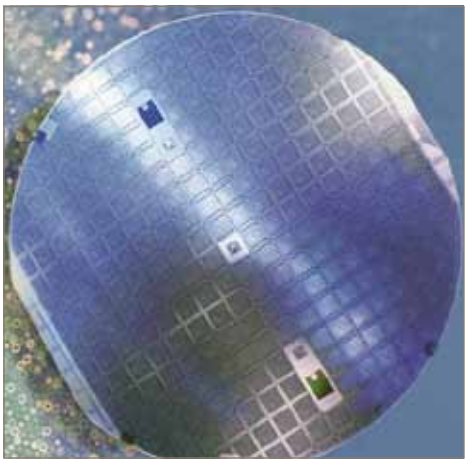
FF370-75

Parker ULTRA™ FFKM for Semiconductor High Purity Plasma Environments



Ultra High Purity, Low Extractables and Minimal Particle Generation:

FF370-75 is a black, opaque, non-filled perfluoroelastomer FFKM specifically formulated by Parker for high purity semiconductor processing up to 300°C. This material was developed for aggressive oxygen and fluorine plasma applications requiring minimal erosions and particle generation. Due to the purity and unique properties of the compound, this material minimizes the potential for particle generation in oxygen and fluorine rich plasmas. Through unique compounding techniques, the level of ionic contaminants is also reduced.

It is recommended for static as well as dynamic applications in deposition processes such as CVD, HDPCVD, SACVD, PECVD as well as etching and ashing processes.

Contact Information:

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Features:

- Non-filled
- Minimal metallic ion content
- Ultra high purity and low extractables
- Minimal particle generation
- Very low erosion rate with excellent resistance to oxygen and fluorine plasmas
- Excellent performance up to 300°C
- Products include O-rings, bonded gate valve doors, slit valve doors and molded shapes

Recommended For:

- Target lids
- Slit valve doors
- Wafer pads
- ISO valves
- Chamber seals
- Heater/Lamps
- Quartz windows
- Gate valve doors

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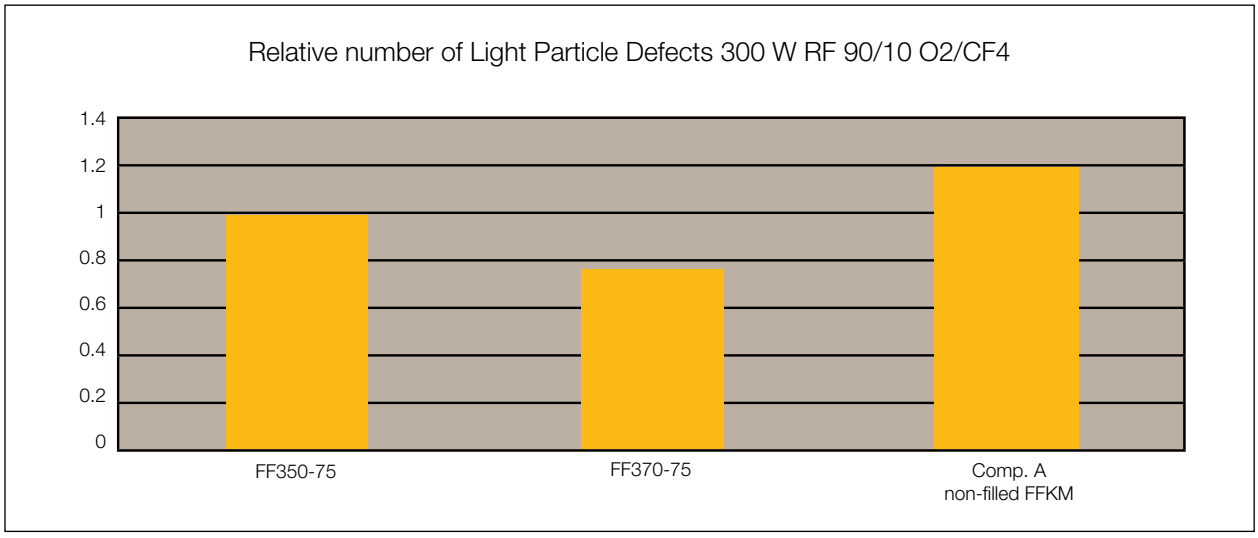
FF370-75 Material Data

Property	Typical Results
Original Properties, ASTM D1414	
Shore A Hardness	74
Tensile Strength, psi	1445
Elongation	211
Modulus at 100% Elongation	528
Compression Set, 70 hours at 175°C, ASTM D395 Method B, 2-214 Size O-rings % Permanent Set	16
Compression Set, 70 hours at 200°C, ASTM D395 Method B, 2-214 Size O-rings % Permanent Set	16
Compression Set, 70 hours at 249°C, ASTM D395 Method B, 2-214 Size O-rings % Permanent Set	28
Compression Set, 70 hours at 315°C, ASTM D395 Method B, 2-214 Size O-rings % Permanent Set	51
Compression Set, 168 hours at 200°C, ASTM D395 Method B, 2-214 Size O-rings % Permanent Set	20
Low Temperature Retraction, ASTM D1329 TR-10 in degrees C	1



The above chart shows the relative particle generation of three material technologies:

- Parker ULTRA FF350-75, a white clean filled FFKM technology designed for excellent plasma resistance
- Parker ULTRA FF370-75, Parker's new non-filled highest purity FFKM
- Competitor A's new FFKM high purity non-filled amber translucent, from major FFKM manufacturer

Results show FF370-75 generates fewer particles than competitor A's non-filled FFKM and Parker's filled FFKM.

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