

Material Profile: Superior™ F815

Superior F815 was specifically developed to be a cost-effective, high-performance compound for semiconductor applications. Superior F815 offers outstanding plasma resistance and low particulation in a wide range of plasma environments.

Features and Benefits

- Outstanding plasma resistance
- Minimum particulation
- Wide chemical resistance
- High physical properties
- Cost-effective

Recommended Processes

- Deposition: CVD, APCVD, HDPCVD, PECVD, RPCVD, SACVD
- Plasma etch: poly, oxide and metal
- Ashing
- Metallization: PVD, sputtering
- Ion Implant



Specialty Fluoroelastomer with No Carbon Fillers
Service Temperature Range: - 30 to 220°C

Equipment Locations

- Chamber Lid Seals
- Bell Jar Seals
- Endpoint Windows
- Gas Inlet Seals
- Isolator Valve Seals
- KF Fittings
- Slit Valve Seals
- Valve Seals
- Window Seals

Typical Physical Properties

Color	Black
Hardness, Shore A	75
Tensile Strength, psi (MPa)	3280 (22.6)
Elongation	420%
Modulus at 100% Elongation, psi (MPa)	595 (4.1)
Compression Set: 70 hrs. at 200°C	29%
Service Temperature Range, °C (°F)	-30 to 220 (-22 to 428)

NOTE - International Seal, Co. (ISC) is a wholly owned subsidiary of Freudenberg-NOK.

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Material Profile: Superior™ F850

Superior F850 was specifically developed to be a cost-effective, high-performance compound for semiconductor applications. Superior F850 offers outstanding plasma resistance and low particulation in a wide range of plasma environments.

Features and Benefits

- Outstanding plasma resistance
- Minimum particulation
- Wide chemical resistance
- High physical properties
- Cost-effective

Recommended Processes

- Deposition: CVD, APCVD, HDPCVD, RPCVD, SACVD
- Plasma etch: poly, oxide and metal
- Ashing
- Metallization: PVD, sputtering
- Ion Implant



Off-White Speciality Fluoroelastomer
Service Temperature Range: - 15 to 200°C

Equipment Locations

- Chamber Lid Seals
- Bell Jar Seals
- Endpoint Windows
- Gas Inlet Seals
- Isolator Valve Seals
- KF Fittings
- Slit Valve Seals
- Valve Seals
- Window Seals

Typical Physical Properties

Color	Off-White
Hardness, Shore A	85
Tensile Strength, psi (MPa)	3920 (27)
Elongation	330%
Modulus at 100% Elongation, psi (MPa)	915 (6.3)
Compression Set: 70 hrs. at 175°C	22%
Service Temperature Range, °C (°F)	-15 to 200 (5 to 390)

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Material Profile: Superior™ F880

Superior F880 was specifically developed to be a cost-effective, high-performance compound for semiconductor applications. Superior F880 has the advantage of being compounded with no metallic elements so that it will not yield metal ions as contaminants in high energy plasma applications.

Features and Benefits

- Outstanding plasma resistance
- Minimum particulation
- Wide chemical resistance
- Excellent high temperature compression set resistance
- High physical properties
- Cost-effective

Recommended Processes

- Deposition: CVD, APCVD, HDPCVD, PECVD, RPCVD, SACVD
- Plasma etch: poly, oxide and metal
- Ashing
- Metallization: PVD, sputtering
- Ion Implant
- Chemical vapor deposition
- Lithography

Equipment Locations

- Chamber Lid Seals
- Bell Jar Seals
- Endpoint Windows
- Gas Inlet Seals
- Isolator Valve Seals
- KF Fittings
- Slit Valve Seals
- Valve Seals
- Window Seals



Specialty Fluoroelastomer with No Carbon Fillers

Typical Physical Properties

Color	Ivory
Hardness, Shore A	75
Tensile Strength, psi (MPa)	3205 (22.1)
Elongation	420%
Compression Set: 70 hrs. at 150°C	23%
Service Temperature Range, °C (°F)	-5 to 150 (23 to 302)

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