

Chemraz® 653

High-Temperature Material for Diffusion Processing

Chemraz® 653 is a black perfluoroelastomer specifically formulated to meet the extreme demands of diffusion, LPCVD, and thin dry processing applications. It exhibits superior compression set resistance and is recommended for static and dynamic high-temperature applications up to 615°F (324°C).

Typical Properties	
Physical Properties	Typical
Color	Black
Polymer Type	Perfluoroelastomer
Specific Gravity	1.99
Hardness, Shore A*	80
Mechanical	
Tensile Strength, psi (kPa)	1830 (12618)
Elongation, %	135
Tensile Modulus, psi (kPa)	
Modulus @ 50% Elongation	360 (2482)
Modulus @ 100% Elongation	1090 (7516)
Compression Set: 70 Hours @ 204°C @ 25% Deflection, %	14
Compression Set: 70 Hours @ 288°C @ 25% Deflection, %	26
Thermal	
Service Temperature Range	0°F to 615°F (-18°C to 324°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.

Note: Color variations and dark spots that might be observed in Chemraz® 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.



Features and Benefits

- Carbon-loaded material
- For use in systems where contamination is less critical
- Suitable for higher temperature applications
- Superior compression set
- Excellent plasma resistance

Applications

- Quartz rod seals
- High-temperature valve seals
- Bell jar seals
- KF fitting seals

Recommended Process Applications

- Oxidation (LPCVD)
- Diffusion
- Rapid thermal processing (RTP)
- Metalization (CVD, PVD, sputtering, evaporation)
- Deposition (CVD, PECVD, RPCVD, HDPCVD, APCVD, SACVD, DCVD)
- Dry plasma etch
- Remote plasma cleans
- Dry ashing
- Implant anneal

Contact Us

Greene Tweed
Kulpsville, PA, USA

Tel: +1.215.256.9521
Fax: +1.215.256.0189

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08/18-GT DS-US-SC-159