



CHEMRAZ® 520

For Harsher Chemistries and Higher Sealing Loads

SEALING SOLUTIONS

Chemraz® 520 is recommended for a wide variety of semiconductor equipment dry processing applications where seal reliability with minimal contamination is required. Additionally, Chemraz 520 offers excellent performance history in static and dynamic plasma and diffusion processes as well as static photolithography processes. Chemraz 520 is formulated for use in high sealing load applications and where temperatures do not exceed 240°C (464°F). Due to the hardness of this material, low-temperature applications may require smoother hardware surface finishes of 10 microinches (Ra) and below.

FEATURES & BENEFITS

- Excellent plasma resistance
- Outstanding physical properties
- Low contaminants
- Withstands higher sealing loads
- Excellent performance history in higher temperature applications

APPLICATIONS

- Door seals
- Slit valves
- Isolator valve seals
- Lid seals
- Gas inlet seals
- KF fitting seals

RECOMMENDED PROCESS APPLICATIONS

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

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TYPICAL PROPERTIES*	
Physical	Typical Value
Color	White
Polymer Type	Perfluoroelastomer
Specific Gravity	2.10
Hardness, Shore A	90
Mechanical	
Tensile Strength, psi (kPa)	1950 (13345)
Elongation, %	110
Tensile Modulus, psi (kPa)	
Modulus @ 50% Elongation	990 (6826)
Modulus @ 100% Elongation	1780 (12273)
Compression Set, 70 hours @ 204°C @ 25% Deflection, %	35
Thermal	
Service Temperature Range	-30°C to 240°C (-22°F to 464°F)

* Note: Unless otherwise indicated, all tests are performed on AS 568A (-214) O-rings.

Statements and recommendations in this publication are based on our experience and knowledge of typical applications of this product and shall not constitute a guarantee of performance nor modify or alter our standard warranty applicable to such products.

Prior to actual use it is recommended compatibility tests be run to determine suitability in a specific application. This is critical where failure could result in injury or damage. A regular program of inspection and replacement should be implemented. Greene, Tweed technical personnel are available to help with a recommendation.