CHEMRAZ® 551

Broad Chemical Resistance at Elevated Temperatures

SEALING SOLUTIONS

With its broad chemical resistance, Chemraz® 551 is ideally suited as a universal sealing material for aqueous semiconductor wafer processing and chemical/DI water distribution systems. Chemraz 551 provides a significantly wider operational band and superior compression set resistance than any other broad range perfluoro-elastomer on the market. With an upper temperature limit of 316ºC (600ºF), it is the elastomer of choice for the most demanding applications from Ozonated DI water to Hot Sulfuric Resist Strip.

Chemraz 551 is one of Greene, Tweed's many cost-effective products and services that increase the reliability and extend the lifetime of our customers' equipment in challenging aqueous conditions while protecting both the operator and the environment from harmful fluid leaks.

FEATURES & BENEFITS

- Broad chemical compatibility
- High temperature capability (up to 316ºC/600ºF)
- Excellent compression set maintains seal integrity in wide temperature and pressure variations as well as vibration
- Breadth of capabilities allows for standardization on one material and reduces inventory line items
- Longer and better seal integrity in seal applications lower overall equipment Cost of Operation (CoO)

APPLICATIONS

- Valve seals
- Fitting and union seals
- Gaskets
- Regulator seals
- Filter seals
- Dispensing seals

TYPICAL PROPERTIES*

Physical	ASTM Method	Typical Value
Color		Black
Polymer Type		Perfluoroelastomer
Specific Gravity	D792	2.00
Hardness, Shore A	D2240	80
Mechanical		
Tensile Strength, psi (kPa)	D1414	3425 (23610)
Elongation, %	D1414	175
Tensile Modulus, psi (kPa)		
Modulus @ 50% Elongation	D1414	450 (3103)
Modulus @ 100% Elongation	D1414	1475 (10170)
Compression Set: 70 hours @ 204ºC @ 25% Deflection, %	D395	20
Thermal		
Temperature Range**		-12°C to 316°C (10ºF to 600ºF)

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

** Consult GT Sales/Engineering for applications that require continuous service temperatures above 80% of the maximum temperature.

RECOMMENDED PROCESS APPLICATIONS

- **Wet etch (oxide, nitride, metal)**
- **Wet photoresist strip (acid, solvent)**
- **Wet cleaning (batch and single wafer)**
- Photolithography track pre-cleaning
- Electrochemical Plating

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.

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