



# CHEMRAZ<sup>®</sup> 505

## SEALING SOLUTIONS

Greene, Tweed's Chemraz<sup>®</sup> 505 a perfluoroelastomer, provides a broader range of chemical resistance than any other compound on the market. With a temperature range of -22°F to 446°F (-30°C to 230°C), Chemraz 505 is the elastomer of choice for more than 90 percent of the most demanding services found in the chemical process and refining industries.

Chemraz 505 is ideal for processes taking place in subzero temperatures as well as for use in multisubstance plants or in mixed media due to its broad chemical resistance.

Chemraz 505 is available for use as O-rings, gaskets and many other custom shapes. Because of its versatility, Chemraz 505 is often used as a standard compound and can be found in a variety of applications including acids, caustics, aldehydes, esters, ethers, aromatics, hot water, steam, amines, methanol, ketones, TBA and MTBE.

## FEATURES & BENEFITS

- Broad chemical compatibility for use with a wide range of harsh solutions
- Lower compression set provides better ability to handle temperature and pressure variations, shaft misalignment and O-ring shrinkage
- Low temperature capabilities (-22°F/-30°C)

## APPLICATIONS

- Mechanical seals
- Valves
- Pump housings
- Reactors
- Compressors
- Sampling/metering equipment
- Mixers
- Controls/instrumentation
- Sprayers/dispensers
- Couplings



TYPICAL PROPERTIES*		
Physical Properties	ASTM Method	Typical Value
Color		Black
Specific Gravity	D297	1.93
Hardness, Shore A, Points	D2240	75
Compression Set, 70 hours @ 400°F (204°C) @ 25% Deflection, %	D395	25
Elongation @ Break, %	D1414	140
Modulus @ 50% Elongation, psi (MPa)	D1414	450 (3.1)
Modulus @ 100% Elongation, psi (MPa)	D1414	1150 (7.9)
Tensile Strength @ Break, psi (MPa)	D1414	1750 (12.1)
Service Temperature Range, °F (°C)		-22°F to 446°F (-30°C to 230°C)

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

Chemraz 505 can be exposed to the following media:

Hot water and steam	Seawater, demineralized water, deionized water, boiler feedwater
Amines	Ethanol amine, ethylene diamine, butylamine, monomethyl amine
Inorganic acids	Sulphuric acid, nitric acid, hydrochloric acid, phosphoric acid, hydrofluoric acid
Organic acids	Formic acid, acetic acid, diacetic acid, benzoic acid, terephthalic acid
Bases	Sodium hydroxide, potassium hydroxide, ammonium hydroxide
Aldehydes	Formaldehyde, acetaldehyde, butyraldehyde, benzaldehyde
Aromatic media	Benzene, toluene, phenol, chlorobenzene, aniline, xylene, benzyl chloride
Aliphatic media	Methane, ethane, ethylene, acetylene
Alcohols	Methanol, ethanol, propanol, benzyl alcohol, ethylene glycol
Ether	Dimethyl ether, diethyl ether, ethylene oxide
Esters	Acetate, acrylate, phthalate
Ketones	Acetone, methylethylketone (MEK), diethylketone
Solvents	Methylene chloride, dimethyl formamide (DMF), tetrahydrofuran (THF), MTBE