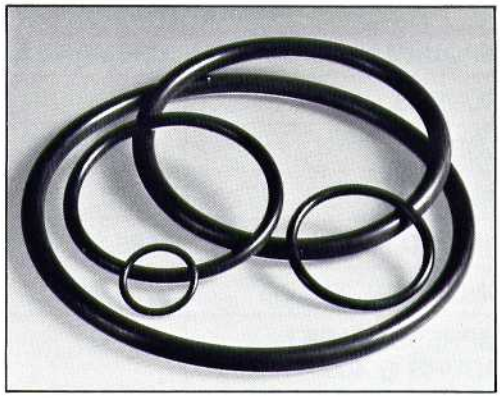
GREENE, TWEED CHEMRAZ®

ELASTOMERIC PTFE

O-RINGS



THE MOST CHEMICAL RESISTANT RUBBER O-RINGS AVAILABLE.

CHEMRAZ O-rings are molded of an elastomer that has the broadest chemical resistance of *any* elastomeric material. They combine the resilience and sealing force of an elastomer with chemical resistance approaching that of Teflon*.

These O-rings last longer and seal better in harsh chemical environments at temperatures from −20° to higher than 450°F.

They offer outstanding in-use cost savings.

WIDE RANGE OF APPLICATIONS

CHEMRAZ O-rings resist attack by nearly all chemical reagents including inorganic and organic acids, alkalines, ketones, esters, aldehydes, alcohols, and fuels. CHEMRAZ *offers outstanding resistance to steam and hot water.* As a result, they provide long-term service in virtually any chemical and petro-chemical process streams, including many where additives or impurities cause other elastomers to swell or degrade.

CHEMRAZ O-rings are more resistant to swelling and embrittlement and retain their elastomeric properties significantly longer. They are easily installed and conform to sealing surface despite irregularities due to assembly or wear, compared to metal seals. Compared with PTFE seals, they do not creep, flow or cause shaft fretting.

CHEMRAZ O-rings cost-effectively solve some of the most difficult sealing problems in many industries.

In chemical processing and petroleum refining, O-rings are used in mechanical seals, pump housings, reactors, mixers, compressor casings, valves, rotometers and other equipment.

Custom designed parts are used as valve seats, stem packings, diaphragms, and gaskets.

In analytical and process instruments, septa, diaphragms, column fittings, ferrules and gaskets handle aggressive tough chemicals.

In semiconductor manufacturing operations, O-rings and other CHEMRAZ seals are utilized to seal aggressive chemicals and specialty gases required for processing.

In nuclear power, CHEMRAZ O-rings for check valves and pressure relief valves increase reliability because of their stability and resistance to chemical additives when compared to other elastomers.

EASY ORDERING

To order CHEMRAZ O-rings, use a part number derived as follows:

9	___ ___ ___	−	5 0 5
O-ring Designator	AS-568A Dash Number		Material Designator

Typical part number:

9026-505 describes a CHEMRAZ O-ring of 1.239″ I.D. and .070″ cross-section.

*Teflon is a DuPont trademark

CHEMRAZ® COMPOUND PHYSICAL PROPERTY DATA*

COMPOUND NUMBER	CHEMRAZ 504	CHEMRAZ 505	CHEMRAZ 510	CHEMRAZ 515
HARDNESS	60A	75A	90A	70A
COLOR	BLACK	BLACK	BLACK	WHITE
TENSILE, PSI	1125	1700	2100	1450
100% MOD., PSI	665	1700	——	1385
ELONGATION, %	155	100	60	105
COMPRESSION SET 70 HOURS @ 400F				
#214 O-RING, %	31	30	35	27
ASTM D-395B PELLETS, %	21	14	17	21

* #214 O-RINGS

GENERAL PHYSICAL PROPERTIES

Thermal Stability	
70 Hrs. at 450°F	
Tensile, % Change	−9
Elongation, % Change	+40
Hardness, pts Change	−4
Steam Resistance	
Volume Swell, %	
375°F, 30 days	2
300°F, 30 days	<1
Estimated Service Temperatures	
Low Temperature Limit, °F	−20
High Temperature Limit, °F	450

Miscellaneous Properties		
Specific gravity (approximate)	d	2.0
Pyrolysis initiation	(°C)	approx. 400
Specific heat	(cal/g. °C)	0.2
Thermal conductivity	(cal/cm. sec. °C)	8×10^{-4}
Glass transition temperature (DSC)	(°C)	−19
Gerhman torsion test T_{50}	(°C)	−21
Impact resilience	(%)	12
Tabor abrasion CS-17, 1000 g	(mg)	2
Flammability (oxygen index)	(%)	>95
Electrical characteristics**		
Volume resistance	(Ω-cm)	1.4×10^{17}
Dielectric constant (23°C, 10^3 Hz)		2.4
Dissipation factor (23°C, 10^3 Hz)		2×10^{-3}
Dielectric breakdown strength (kV/0.15 mm)		7.0
Refractive index (raw rubber)	n_D (23°C)	1.32
Coefficient Thermal Expansion	40°-125°C	1.25×10^{-4}
	125°-230°C	2.15×10^{-4}

** Non-carbon compound