E0962-90

Steam resistant EPDM seals with superior temperature and chemical resistance

Applications

Many applications involving steam exposure exceed the normal temperature range associated with traditional ethylene propylene (-57 to 121°C, -70 to 250°F) materials. Parker's compound E0962-90 EPDM has been developed to provide an effective sealing solution in the hostile chemical, pressure, and temperature conditions associated with many oilfield applications.

Compound E0962-90 has been used successfully in applications with temperatures up to 260°C (500°F), and for short durations up to 315°C (600°F) in steam. Recommended specifically for nuclear, geothermal, and SAGD applications, E0962-90 is an ideal choice for use in pumps, valves and crude delivery systems. It will also perform with satisfactory results in some petroleum fluids with up to 10% concentration.

Chemical Compatibility

E0962-90 is **recommended** for a wide range of chemicals including:

- Water/Steam
- Water Based Drilling Fluids
- Amines
- Gaseous CO_2
- Hydrogen Sulfide
- Silicone Oil/Grease
- Petroleum Fluids <10% Mixtures
- Ketones
- Phosphate Esters
- Alcohols
- Dilute Acids
- Ozone
- Cleaning Agents
- Alkalines

E0962-90 is **not recommended** for:

- Mineral Oil Products
- Greases
- Oils
- Fuels

Key Features of Parker E0962-90

- Outstanding performance in water/steam applications up to 260°C (500°F)
- Can seal in steam up to 315°C (600°F) for short durations
- Resists extrusion at high pressure
- Resists explosive decompression
- Suitable for service in steam/oil mixtures of less than 10% petroleum fluid
- Moderate H2S resistance
- RGD resistant per ISO 23936-2 100% H_2 and CO_2

E0962-90 (Platens)

Original Physical Properties	
Hardness, Type A, pts.	87
Tensile Strength, psi	1960
Elongation, %	101
Modulus @ 100%, psi	1900
Specific Gravity	1.11

Aging in NACE B 5%/95% Water 70 HRS @ 100°C (212°F)	
Hardness, Type A, chg. pts.	-4
Tensile Strength, chg. %	+6
Elongation, chg. %	-28
Modulus @ 100%, psi	1470
Volume Change, %	+9.6
Compression Set, %	16.2

Aging in 28% HCl/72% Water 70 HRS @ 70°C (158°F)	
Hardness, Type A, chg. pts.	0
Tensile Strength, chg. %	+19
Elongation, chg. %	+11
Modulus @ 100%, chg. %	+8
Volume Change, %	+0.9
Compression Set, %	28.0

E0962-90 (2-336 O-Rings) Extrusion Test	
Water @ 177°C (350°F)	
Eccentric Gap, 0.015"	
Pressure to rupture, psi	23,000

E0962-90 (2-214 O-Rings)

Original Physical Properties	
Hardness, Type A, pts.	87
Tensile Strength, psi	2150
Elongation, %	96
Modulus @ 100%, psi	--
Specific Gravity	1.13

Aging in Steam 168 HRS @ 288°C (550°F)	
Hardness, Type A, chg. pts.	-5
Tensile Strength, chg. pts.	-19
Elongation, chg. %	+6
Modulus @ 100%, chg. %	--
Volume Change, %	+2.1
Compression Set, %	46.7

Aging in Steam 168 HRS @ 316°C (600°F)	
Hardness, Type A, chg. pts.	-22
Tensile Strength, chg. %	-76
Elongation, chg. %	+14
Modulus @ 100%, chg. %	--
Volume Change, %	+4.0
Compression Set, %	85.7

Aging in Steam with 10% Mil-H-5606D Oil 168 HRS @ 288°C (550°F)	
Hardness, Type A, chg. pts.	-15
Tensile Strength, chg. %	-52
Elongation, chg. %	+2
Modulus @ 100%, chg. %	--
Volume Change, %	+16.6
Compression Set, %	76.5

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No. 5723B1-USA 2-2025