

**E0962-90 Steam Resistant Ethylene Propylene**

No. 5723

**Parker E0962-90  
Geothermal EPDM seals  
with superior  
temperature, steam,  
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 EPDM compound E0962-90 has been developed to provide an effective sealing solution in the hostile chemical, pressure, and temperature conditions associated with many oilfield applications.

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 geothermal applications, E0962-90 is an ideal choice for use in pumps, valves and crude delivery systems. It will also perform with satisfactory results in applications involving petroleum fluids up to 10% in concentration.

**Chemical Compatibility**

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

<b>Water/Steam</b>	<b>Ketones</b>
<b>Water Based Drilling Fluids</b>	<b>Phosphate Esters</b>
<b>Amines</b>	<b>Alcohols</b>
<b>Alkalines</b>	<b>Dilute Acids</b>
<b>Hydrogen Sulfide</b>	<b>Ozone</b>
<b>Silicone Oil/Grease</b>	<b>Cleaning Agents</b>
<b>Gaseous CO<sub>2</sub></b>	
<b>Petroleum Fluids &lt; 10% Mixtures</b>	

**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)
- Resists extrusion at high pressure
- Resists explosive decompression
- Suitable for service in steam/oil mixtures of less than 10% petroleum fluid
- Can seal in steam up to 315°C (600°F) for short durations
- Moderate H<sub>2</sub>S resistance

# Material Test Data

## 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. pts.	+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%, psi	1710
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. %	466
Volume Change, %	+4.0
Compression Set, %	85.7

### Aging in Steam with 10% Mil-H-5606D Oil

<u>168 HRS @ 288°C (550°F)</u>	
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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