

**Parofluor™ V8545-75 and V8588-90
Perfluorinated Elastomers**

No. 5722B1-USA

Parofluor™ compounds for superior sealing in harsh Energy, Oil and Gas (EOG) environments**Applications**

Parker's series of Parofluor™ perfluorinated elastomer materials are formulated to perform in the most demanding environments. These materials resist the aggressive chemical media common to the oil and gas industries, including H₂S, hydrocarbon and polar solvents. Parofluor materials have excellent thermal stability up to 300°C (572°F). Parofluor V8588-90 also resists extrusion and helps protect equipment from the detrimental effects of explosive decompression.

Availability

The Parker O-Ring Division offers standard and non-standard sized Parofluor O-Rings, custom molded shapes and sheet stock. Parofluor compounds are available in Shore A hardness ranging from 65 to 90 durometer.

Chemical Compatibility

Parofluor compounds **V8545-75** and **V8588-90** are **recommended** for a wide range of chemicals including:

Aliphatic and aromatic hydrocarbons
Chlorinated hydrocarbons
Acetone
Methylethylketone
Ethylacetate
Diethylether
Dioxane
Inorganic and organic acids
Water and steam
Drilling muds
Amine based fluids

Parofluor compounds **V8545-75** and **V8588-90** are **not recommended** for use in:

Fluorinated refrigerants such as:
R11, 12, 13, 113, 114, etc.

**Key Features and Benefits**

- Excellent thermal stability and chemical compatibility
- Good resiliency and mechanical properties
- Good explosive decompression resistance (V8588-90)
- Improved cost effectiveness
- Reduced maintenance costs
- Superior quality manufacturing processes
- Increased safety and reliability

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Parker Parofluor™ Compound

V8545-75

V8588-90

Typical Physical Properties

Hardness, Shore A, pts.	75	90
Tensile strength, MPa	16.4	21.8
Elongation, %	213	110
Modulus @ 100% elongation, MPa	10.5	19.8
Temperature range, °C	-15 to 300	-15 to 280
Compression set: 70 hrs @ 200°C (392°F)	20	29
Compression set: 70 hrs @ 230°C (446°F)	28	41

Sulfuric Acid (98%) - 70 hrs @ 60°C (140°F)

Hardness change, pts IRHD	-2.5	-2.0
Volume change, %	+1.3	+0.5

Hydrofluoric Acid (49%) - 2 wks @ 25°C (77°F)

Hardness change, pts IRHD	-1.5	-1.0
Volume change, %	+1.0	+0.8

Benzene - 168 hrs @ 23°C (74°F)

Hardness change, pts IRHD	-2.5	No change
Volume change, %	+0.4	+0.5

Benzene - 96hrs @ 230°C (446°F)

Hardness change, pts IRHD	-8.0	-6.3
Volume change, %	+36.0	-27.0

MEK - 168 hrs @ 23°C (74°F)

Hardness change, pts IRHD	No change	-1.0
Volume change, %	+0.5	+0.3

MTBE Soak - 216 hrs @ 25°C (77°F)

Volume swell, %	-0.3	Not tested
Dry out shrinkage, % 240 hrs @ RT	-0.05	

Heat Aging - 200 hrs @ 250°C (482°F)

Hardness change, pts IRHD	-1.0	Not tested
Tensile change, %	+36.0	
Elongation change, %	+10.3	
Weight change, %	-2.1	

Heat Aging - 70 hrs @ 200°C (392°F)

Hardness change, pts IRHD	Not tested	-2.0
Tensile change, %		+5.5
Elongation change, %		+36.0
Weight change, %		-4.2

Unless otherwise noted, these are test values from a limited number of samples and should not be used for establishing specific limitations.

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