

# Hexoloy® Silicon Carbide Seal Performance Against Itself or Carbon-Graphite



Saint-Gobain Ceramics  
Structural Ceramics

## Power Consumption (kW)

Primary Ring		Hexoloy® SA		Hexoloy® SP	
Pressure (bar)	PV (bar x m/s)	Hexoloy® SA	Carbon-Graphite	Hexoloy® SP	Carbon-Graphite
10	55.1	0.53	0.56	0.48	0.54
25	95.3	0.49	0.75	0.65	0.65
50	162.4	1.03	0.93	0.85	0.85
75	229.5	1.09	1.00	1.03	0.98
125	363.7	—	1.28	1.30	1.03

## Wear Rate of Silicon Carbide Primary Ring (µm/hr)

10	55.1	0.01	0.03	0.00	0.03
25	95.3	0.03	0.15	0.01	0.01
50	162.4	0.01	0.18	0.01	0.09
75	229.5	0.01	0.17	0.02	0.00
125	363.7	—	0.03	0.01	0.00

## Wear Rate of Silicon Carbide or Carbon-Graphite Mating Ring (µm/hr)

10	55.1	0.03	0.04	0.00	0.04
25	95.3	0.02	0.21	0.00	0.05
50	162.4	0.00	0.25	0.01	0.00
75	229.5	0.01	0.38	0.02	0.08
125	363.7	—	0.42	0.01	0.00

## Leakage Rate (cc/hr)

10	55.1	4.17	0.00	0.00	0.00
25	95.3	22.10	0.00	0.00	0.00
50	162.4	7.50	0.00	0.00	0.00
75	229.5	11.05	0.00	0.00	0.00
125	363.7	—	0.00	0.00	0.00

### Test Performance:

Seal Size	75 mm OD
Speed	3000 RPM
Temperature	60°C
Duration	48 hrs
Fluid	Water

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