

# Hexoloy® Silicon Carbide Seal Performance Against Carbon-Graphite vs. Other Hard Face Materials



Saint-Gobain Ceramics  
Structural Ceramics

## Power Consumption (kW)

Primary Ring		Hexoloy® SA	Hexoloy® SP	Reaction Bonded SiC	Tungsten Carbide
Pressure (bar)	PV (bar x m/s)				
10	55.1	0.56	0.54	0.51	0.72
25	95.3	0.75	0.65	0.56	0.87
50	162.4	0.93	0.85	0.76	1.18
75	229.5	1.00	0.98	0.79	1.60
125	363.7	1.28	1.03	1.03	—

## Wear Rate of Primary Ring (µm/hr)

10	55.1	0.03	0.03	0.03	0.00
25	95.3	0.15	0.01	0.03	0.02
50	162.4	0.18	0.09	0.09	0.00
75	229.5	0.17	0.00	0.13	0.05
125	363.7	0.30	0.00	0.00	—

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

10	55.1	0.04	0.04	0.00	0.00
25	95.3	0.21	0.05	0.10	0.23
50	162.4	0.25	0.00	0.00	0.49
75	229.5	0.38	0.08	0.19	1.13
125	363.7	0.42	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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Form No. B-1005-5 10/03  
Printed in USA

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