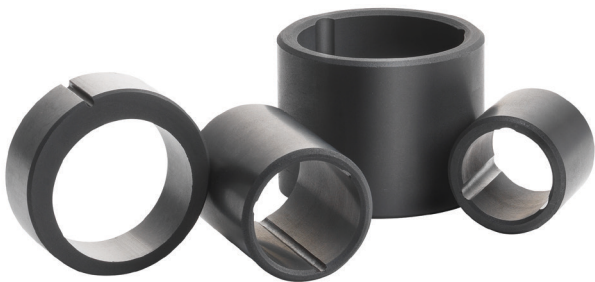


Mechanical carbon by Ergoseal provides top-tier quality and performance for pumps and mechanical seals. The wide range of applications served include those requiring self-lubrication and the ability to withstand high loading and high temperatures. Please contact us to find the right mechanical carbon for your application.

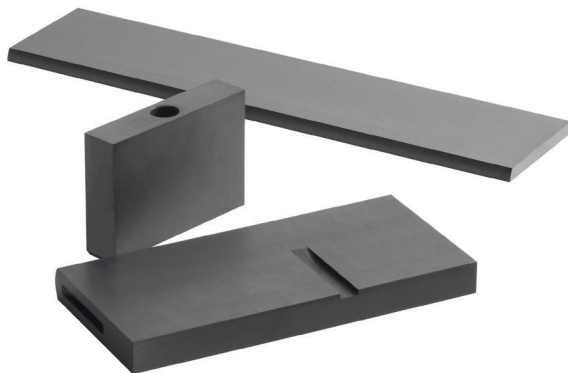
BUSHINGS



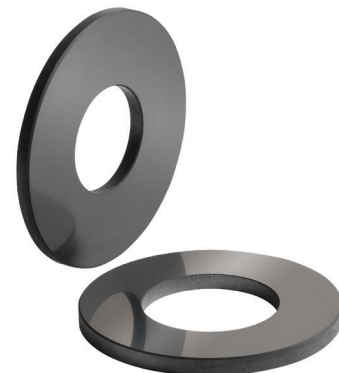
FACES



VANES



THRUSTPADS



MATERIAL COMPOSITION GRADE

CG

Unimpregnated carbon graphite for general use

CGR

Resin impregnated carbon graphite for higher loads

CGA

Antimony impregnated carbon graphite for higher loads and temperatures

GFP

Graphite filled phenolic resin

PHYSICAL PROPERTIES OF SELECTED GRADES

Material Code	Material Composition Grade	Apparent Density	Hardness	Flexural Strength	Compressive Strength	Tensile Strength	Modulus of Elasticity	Coefficient of Thermal Expansion	Thermal Conductivity	Temperature Limit in Oxidizing Atmosphere	Temperature Limit in Non-Oxidizing Atmosphere	Porosity	Application
US Standard		lb/ft ³	HRB, 5/100	psi	psi	psi	10 ⁶ psi	10 ⁻⁶ /°F	Btu/(hr ft °F)	°F **	°F **	% vol	
HE-30	CG	104-106	85 min	5,800-6,520	20,300	-	2.90-3.05	1.7-2.2	5.9-6.4	626-662	1832	13 max	Well-lubricated bearings
HE-31	CG	112	105	9,430	26,100	-	3.48	2.8	6.4	662	662	2.5 max	Mechanical seals and thrust bearings at high loads/temps
HE-32	CGR	106-112	105 min	9,280-10,200	29,000	-	3.19-3.77	2.2-2.8	5.8	392	392	2.5 max	Mechanical seals and thrust bearings at high loads
HE-33	CGA	144	115 min	13,100	34,800-37,700	-	4.06-4.35	2.2	5.8	662-752	932-1022	0.5-2	Mechanical seals, thrust bearings, and steam joints at high loads/ temps
HE-34	CG	144	105 min	13,100	34,800-37,700	-	4.06-4.35	2.2	8.1-11.6	662-752	932-1022	0.5-2	Vanes in dry-running compressors and vacuum pumps
HE-35	CGA	150	105	10,200	29,000	-	-	2.8	11.6	626	986	2.5	Mechanical seals, thrust bearings, and steam joints at medium loads and high temps
HE-38	CGR	112-115	100 min	7,980-8,410	23,200-26,100	-	3.05	2.5-2.8	6.9-7.5	392-482	392-752	1-2.5	Bushings, bearings, and general purpose mechanical seals
HE-53	GFP	57.4	109	9,180	20,900	4,500	2.21	16	1.12	481	481	-	Mechanical seals and vanes for fuel pump applications
HE-54	GFP	53.7	-	12,000	23,400	7,830	2.32	11	-	-	-	-	Mechanical seals and vanes
SI/Metric		g/cm ³	HRB, 5/100	MPa	MPa	MPa	GPa	10 ⁻⁶ /°C	W/(m K)	°C **	°C **	% vol	
HE-30	CG	1.67-1.7	85 min	40-45	140	-	20-21	3-4	10-11	330-350	1,000	13 max	Well-lubricated bearings
HE-31	CG	1.8	105	65	180	-	24	4.9	11	350	350	2.5 max	Mechanical seals and thrust bearings at high loads/temps
HE-32	CGR	1.7-1.8	105 min	64-70	200 min	-	22-26	4-5	10 min	200	200	2.5 max	Mechanical seals and thrust bearings at high loads
HE-33	CGA	2.3	115 min	90	240-260	-	28-30	4	15-20	350-400	500-550	0.5-2	Mechanical seals, thrust bearings, and steam joints at high loads/ temps
HE-34	CG	1.7-1.8	105 min	64-75	115-206	-	21	4	14-20	350-400	500-550	0.5-2	Vanes in dry-running compressors and vacuum pumps
HE-35	CGA	2.4	105	70	200	-	-	5	20	330	530	2.5	Mechanical seals, thrust bearings, and steam joints at medium loads and high temps
HE-38	CGR	1.8-1.84	100 min	55-58	160-180	-	21	4.5-5	12-13	200-250	200-400	1-2.5	Bushings, bearings, and general purpose mechanical seals
HE-53	GFP	0.92	109	63.3	144	31	15.2	28	1.94	250	250	-	Mechanical seals and vanes for fuel pump applications
HE-54	GFP	0.86	-	83	161	54	16	20	-	-	-	-	Mechanical seals and vanes

* Physical property values tabulated above are typical values for reference and not binding. ** Highest temperature only available in specific applications.