

Redco™ PEEK

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Redco™ Peek is high temperature resistant with excellent chemical and fatigue resistance as well as thermal stability. It exhibits superior mechanical and electrical properties, with a maximum continuous working temperature of 480 ° F. Redco™ Peek has excellent retention of mechanical properties up to 570° F in a steam or high-pressure water environment.

Redco™ Peek possess superior chemical resistance allowing it to work effectively as a metal replacement in harsh environments. It is also inert to all common solvents and resists a wide range of organic and inorganic liquids, when extensive machining is required, a secondary annealing process should be considered.

Redco™ Peek is an excellent material for a wide spectrum of applications where thermal, chemical, and combustion properties are critical to performance. The addition of glass fiber and carbon fiber reinforcements enhances the mechanical and thermal properties of the basic PEEK material.

- High Continuous Working Temperature
- Exceptional Chemical Resistance
- Excellent Hydrolysis Resistance
- Good Radiation Resistance
- Outstanding Wear & Abrasion Resistance
- Low Smoke & Toxic Gas Emissions

STANDARD COLOR: White

STANDARD SHEET SIZE: 24" x 48"

STANDARD SHEET THICKNESS: 1/4" - 4"

TYPICAL APPLICATIONS:

PEEK's exceptional property profile enables it to be utilized in many of the most critical areas in general industry, such as: automotive, marine, electronics, medical, aero-space, etc.



Redco™ Peek Rollers

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PROPERTY	ASTM or UL TEST	UNREINFORCED	GLASS REINFORCED		30% CARBON REINFORCED
			20%	30%	
PHYSICAL					
SPECIFIC GRAVITY	D792	1.32	1.43	1.49	1.44
SPECIFIC VOLUME (in ³ /lb)	D792	21.0	19.3	18.6	-
WATER ABSORPTION, 24h, 1/8-in thk (%)	D570	0.1	-	0.11	0.06
MECHANICAL					
TENSILE STRENGTH	D638	14,000 - 16,000	17,800	14,000	19,000
ELONGATION (%)	D638	40	2.5	2.2	5
TENSILE MODULUS (Gpg, ksi)	D638	4.34, 500-630		6.89, 1000	7.58, 1100
FLEXURAL STRENGTH (psi)	D790	24,700	27,800	23,000	25,750
FLEXURAL MODULUS	D790	5.3	9.7	10	12.5
IMPACT STRENGTH, IZOD (ft-lb/in of notch)	D256	1.6	1.6	0.8	1.03
COMPRESSIVE STRENGTH	D695	17,100 - 20,000		22,000	29,000
COMPRESSIVE MODULUS (Gpa, ksi)	D695	3.45, 500		3.79, 550	
HARDNESS	D785/D2240	85D, 99-100M		89D, 103M	93D, 102M
COEFFICIENT OF FRICTION	vs. steel	0.4			0.2
THERMAL					
THERMAL CONDUCTIVITY (BTU-m/ft ² -hr-°F)	F433	1.75	-	2.98	6.4
COEFFICIENT OF LINEAR THERMAL EXPANSION (10 ⁻⁵ in/in- °C)	D696				
< 150°C		4.7	2.4	2.2	1.5
> 150°C		10.8	-	-	-
DEFLECTION TEMPERATURE (°F)	D648				
AT 264 PSI		320	545	450	518
FLAMMABILITY RATING, 1/8 in	UL 94	V-0	V-0	V-0	V-0
MAX TEMPERATURE (°F)		480 - 482		480	482
ELECTRICAL					
DIELECTRIC CONSTANT	D150				
AT 1 KHz		3.3	-	-	-
DISSIPATION FACTOR	D150				
AT 1 KHz		0.003	-	-	-
VOLUME RESISTANCY (ohm-cm)	D257				
AT 73°F, 50% RH		4.9 x 10 ¹⁶	-	-	1.4 x 10 ⁵
DIELECTRIC STRENGTH (KV/mm, V/mil)	D149	18.9, 480		19.7, 500	1.26, 32

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