

RÖCHLING datasheet

Peek | 2009

SUSTAPEEK & SUSTAPEEK GF 30

SUSTAPEEK (polyetheretherketone) offers the best balance of properties of all thermoplastic materials. In addition to outstanding mechanical properties, chemical resistance and thermal performance, SUSTAPEEK can withstand long term continuous temperatures of 480° F as well as exposure to hot water or steam with low moisture absorption. SUSTAPEEK GF 30 (30% glass reinforced) has improved stiffness, strength and expansion rate, especially at elevated temperatures. Also available as SUSTAPEEK HT (high temp), SUSTAPEEK CF 30 (30% carbon fiber reinforced) and SUSTAPEEK MOD (bearing grade).

Product Features:

- Continuous use temperature of 480° F
- Intrinsic flame retardancy
- Outstanding rigidity at high temperatures
- Excellent chemical resistance
- Good dimensional stability
- FDA compliant
- Excellent hydrolysis resistance
- Available in Natural & Black

Typical Properties of Stock Shapes

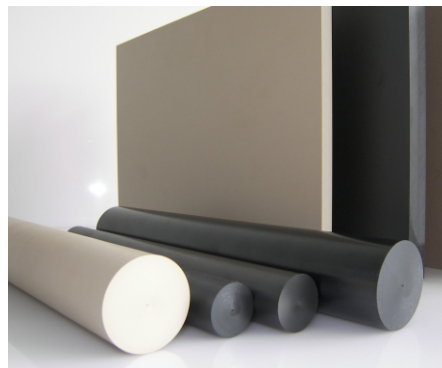
Property	Units	Test Method	Value Natural	Value GF 30
Specific Gravity	-	ASTM D 792	1.32	1.51
Water Absorption 24 hrs	%	ASTM D 570	0.1	0.1
Water Absorption Saturation	%	ASTM D 570	0.5	0.3
Flammability	-	UL 94	V-0	V-0
Tensile Strength	psi	ASTM D 638	16,000	24,000
Elongation	%	ASTM D 638	20	3
Modulus	psi	ASTM D 638	500,000	1,300,000
Flexural Strength	psi	ASTM D 790	25,000	28,000
Modulus	psi	ASTM D 790	600,000	1,350,000
Notched Izod	ft-lb/in	ASTM D 256	1.2	1.4
Rockwell Hardness	-	ASTM D 785	M105	M105
HDT @ 264 psi	°F	ASTM D 648	320	500
Coefficient Linear thermal expansion	in/in/oF	ASTM D 696	2.6 x 10 ⁻⁵	1.20 x 10 ⁻⁵
Dielectric Strength	V / mil	ASTM D 149	480	500
Volume Resistivity	ohm-cm	ASTM D 257	10 ¹⁵	10 ¹⁶
Dielectric Constant	-	ASTM D 150	3.3	-

Typical Applications

- Analytical instruments
- Aircraft interior components
- Medical device and instrumentation
- Semiconductor applications
- Down hole oil well parts
- Pump rotors and housing
- Automotive thrust washers

Certifications

- ASTM D6262-98
- Complies with FDA 21 CFR 177.2415 (Natural only)
- Accepted by USDA standards (Natural only)



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