

# CZ-1050

- **Out line:** CZ-1050 is pitch based carbon fiber highly filled PPS compound and has excellent self lubricant performance: low wear, and low friction properties.
- **Color:** Natural (Black)

## Engineering Properties of CZ-1050

Properties	Test Method	Unit	CZ-1050
General Information			Pitch-CF50% Lubricant
<ASTM>			
<b>Physical</b>			
Specific gravity	D-792	-	1.45
Water absorption, 23deg. /24Hrs. /in water	D-570	Wt. %	0.10
Mold shrinkage, MD /TD <sup>a</sup>	D-955	%	0.23/1.0
<b>Mechanical</b>			
Tensile strength	D-638	MPa	150
Tensile modulus	D-638	MPa	17000
Tensile elongation at break	D-638	%	0.8
Poisson's ratio	-	-	0.34
Flexural strength	D-790	MPa	240
Flexural modulus	D-790	MPa	14000
Flexural elongation at break	D-790	%	1.0
Izod impact strength	D-256	J/m	
notched / un notched			50/400
Compressive strength	D-695	MPa	150
Rockwell hardness, R/M	D-785	-	120/100
Coefficient of friction <sup>b</sup> , static /dynamic	-	-	0.20/0.20
<b>Thermal</b>			
Distortion temp. of under load, 1.82MPa	D-648	°C	265
Coefficient of thermal expansion <sup>c</sup> , -30 to 90°C	D-696	m/mK	1.8x10 <sup>-5</sup>
UL Flammability <sup>d</sup> , t~0.8mm	UL-94	-	V-0
<b>Electrical</b>			
Dielectric strength, t=1.6mm	D-149	kv/mm	-
Dielectric constant, 1MHz	D-150	-	-
Dissipation factor, 1MHz	D-150	-	-
Comparative tracking index (CTI)	D-3638	Volt	-
Arc resistance	D-495	sec.	-
Volume resistibility	D-257	Ohm.cm	10 <sup>-5-6</sup>
<b>Process Conditions</b>			
Cylinder temperature	-	°C	300-340
Mold temperature	-	°C	120-150

a: MD; Mold direction, TD; Transverse direction, b: P=150KPa, V=0.3m/s, PPS vs. carbon steel, c: Average value of MD & TD, d: UL file No. E53829



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