

## Z-230 BLACK-2(B)

- **Product Summary:** Z-230 Black-2(B) is a 30% glass fiber reinforced super tough PPS compound with excellent impact, thermal shock, hot water resistance and less outgas compared to Z-230.

- **Color:** Black

Engineering Properties			
Properties	Test Method	Unit	Typical value
General Information			GF30% Super tough Low outgas
<b>Physical</b>			
Density	ISO 1183-1	g/cm <sup>3</sup>	1.56
Water absorption, 23°C /24hrs.	ISO 62	%	0.02
Mold shrinkage <sup>a</sup>	ISO 294-4	%	0.3/0.8
<b>Mechanical</b>			
Tensile strength	ISO 527-1,2	MPa	160
Tensile modulus	ISO 527-1,2	GPa	12.0
Tensile strain at break	ISO 527-1,2	%	2.0
Flexural strength	ISO 178	MPa	250
Flexural modulus	ISO 178	GPa	11.0
Flexural strain at flexural strength	ISO 178	%	2.5
Charpy impact strength, notched	ISO 179/1eA	kJ/m <sup>2</sup>	10
unnotched	ISO 179/1eU	kJ/m <sup>2</sup>	58
Co-eff. of friction <sup>b</sup> , static/dynamic	-	-	-
<b>Thermal</b>			
Heat deflection temperature, 1.80MPa	ISO 75-1,2	°C	265
Co-eff. of linear thermal expansion <sup>a</sup> , -50~50 °C	ISO 11359-2	x 10 <sup>-5</sup> /K	1.5/5.0
Co-eff. of linear thermal expansion <sup>a</sup> , 100~200 °C	ISO 11359-2	x 10 <sup>-5</sup> /K	1.5/13.0
Flammability <sup>c</sup> /thickness (mm)	UL-94	-	V-0/0.75
<b>Electrical</b>			
Electric strength, t=1.0mm	IEC 60243-1	kV/mm	27
Relative permittivity, 1MHz	IEC 62631-2-1	-	4
Dielectric dissipation factor, 1MHz	IEC 62631-2-1	-	0.004
Comparative Tracking Index (CTI)	IEC 60112	V	175
Volume resistivity	IEC 62631-3-1	Ω·cm	10 <sup>16</sup>
<b>Molding Condition</b>			
Cylinder temperature	-	°C	290-320
Mold temperature	-	°C	130-150

a: Flow direction/Transverse direction

b: P=150kPa, V=0.3m/s, PPS vs. carbon steel

c: UL file No. E53829