

Z-650

- **Product Summary:** Z-650 is a glass fiber and mineral filled super tough PPS compound with excellent impact, thermal shock, hot water resistance and improved dimensional stability.
- **Color:** Black

Engineering Properties of Z-650

Properties	Test Method	Unit	Z-650
General Information			GF/Filler Super Tough
Physical			
Density	ISO 1183	g/cm ³	1.73
Water absorption, 23°C /24hrs.	ISO 62	%	0.02
Mold shrinkage ^a	ISO 294-4	%	0.3/0.7
Mechanical			
Tensile strength	ISO 527-1,2	MPa	175
Tensile modulus	ISO 527-1,2	GPa	16.5
Tensile strain at break	ISO 527-1,2	%	1.6
Flexural strength	ISO 178	MPa	275
Flexural modulus	ISO 178	GPa	16.0
Flexural strain at break	ISO 178	%	1.9
Charpy impact strength, notched	ISO 179/1eA	kJ/m ²	9
unnotched	ISO 179/1eU	kJ/m ²	50
Co-eff. of friction ^b , static/dynamic	-	-	-
Thermal			
Heat deflection temperature, 1.80MPa	ISO 75-1,2	°C	270
Co-eff. of linear thermal expansion ^a , -50~50 °C	ISO 11359-2	x 10 ⁻⁵ /K	1.5/4.0
Co-eff. of linear thermal expansion ^a , 100~200 °C	ISO 11359-2	x 10 ⁻⁵ /K	1.5/9.0
Flammability ^c /thickness (mm)	UL-94	-	V-0/1.5
Electrical			
Dielectric strength, t=1.0mm	IEC 60243-1	kV/mm	23
Dielectric constant, 1MHz	IEC 60250	-	5
Dissipation factor, 1MHz	IEC 60250	-	0.005
Comparative Tracking Index (CTI)	IEC 60112	V	175
Volume resistivity	IEC 60093	Ω·cm	10 ¹⁶
Molding Condition			
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