

## Z-650 Series

■ **Outline: Z-650 series products are glass fiber and mineral filled super tough PPS compounds which provide excellent impact, thermal shock and hot water resistances as well as improved dimensional stability.**

	Method	Unit	Z-650	Z-650-T6
<b>General Information</b>			Super Tough	Super Tough High Strength
<b>Physical Properties</b>				
Specific gravity	ISO 1183/A	g/cm <sup>3</sup>	1.72	1.72
Mold shrinkage (parallel) <sup>a</sup>	ISO 294-4	%	0.4	0.4
Mold shrinkage (transverse) <sup>a</sup>	ISO 294-4	%	0.6	0.6
Water absorption (23°C, sat.)	ISO 62	Wt.%	0.02	0.02
<b>Mechanical Properties</b>				
Tensile strength	ISO 527-1, -2	MPa	160	160
Tensile modulus	ISO 527-1, -2	MPa	14500	15000
Tensile elongation at break	ISO 527-1, -2	%	2.0	1.8
Flexural strength	ISO 178	MPa	265	265
Flexural modulus	ISO 178	MPa	13000	13500
Flexural elongation at break	ISO 178	%	2.3	2.1
Charpy impact strength	ISO 179/1eU	kJ/m <sup>2</sup>	45	47
Charpy notched impact strength	ISO 179/1eA	kJ/m <sup>2</sup>	11	12
Unnotched impact strength (Izod)	ISO 180/A	kJ/m <sup>2</sup>	43	45
Notched impact strength (Izod)	ISO 180/A	kJ/m <sup>2</sup>	9	10
Rockwell hardness	ISO 2039/2	M-Scale	-	-
<b>Thermal Properties</b>				
Melting temperature	ISO 11357	°C	280	280
Glass transition temperature (10 K/min)	ISO 11357	°C	90	90
Deflection temperature (1.82 MPa)	ISO 75-1, -2 /A	°C	255	255
Coefficient of thermal expansion	ISO 11359-1, -2	m/mK	2.0x10 <sup>-5</sup>	2.0x10 <sup>-5</sup>
Flammability* (at thickness h)	UL-94	class	V-0	V-0
Tested thickness (h)	UL-94	mm	1.5	1.5
<b>Electrical Properties</b>				
Dielectric strength (t=1.6mm)	IEC 60243-1	kV/mm	16	16
Dielectric constant, 1MHz	IEC 60250	-	5	5
Dissipation factor, 1MHz	IEC 60250	-	0.005	0.005
Volume resistivity	IEC 60093	Ohm*cm	10 <sup>16</sup>	10 <sup>16</sup>
Comparative tracking index (CTI)	IEC 60112	Volt	-	-
Arc resistance	ASTM D495	sec.	-	-
<b>Processing Conditions</b>				
Cylinder temperature		°C	290-320	290-320
Mold temperature		°C	120-150	120-150

\*UL file No. E53829

\*a) Measured by rectangle type specimen with film gate, GF was orientated with following mold flow completely

