

FZ-1140 Series

■ **Outline: FZ-1140 series products are 40% glass fiber reinforced compounds based on cross-linked polyphenylene sulfide (PPS) polymers**

	Method	Unit	FZ-1140	FZ-1140-D5
General Information			General Purpose	Low Flash Tough
Physical Properties				
Specific gravity	ISO 1183/A	g/cm ³	1.66	1.66
Mold shrinkage (parallel) ^a	ISO 294-4	%	0.4	0.4
Mold shrinkage (transverse) ^a	ISO 294-4	%	0.7	0.7
Water absorption (23°C, sat.)	ISO 62	Wt.%	0.02	0.02
Mechanical Properties				
Tensile strength	ISO 527-1, -2	MPa	175	180
Tensile modulus	ISO 527-1, -2	MPa	15000	15000
Tensile elongation at break	ISO 527-1, -2	%	1.7	1.9
Flexural strength	ISO 178	MPa	280	290
Flexural modulus	ISO 178	MPa	13500	13500
Flexural elongation at break	ISO 178	%	2.0	2.2
Charpy impact strength	ISO 179/1eU	kJ/m ²	38	40
Charpy notched impact strength	ISO 179/1eA	kJ/m ²	11	11
Unnotched impact strength (Izod)	ISO 180/A	kJ/m ²	36	40
Notched impact strength (Izod)	ISO 180/A	kJ/m ²	9	9
Rockwell hardness	ISO 2039/2	M-Scale	100	100
Thermal Properties				
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	265	265
Coefficient of thermal expansion	ISO 11359-1, -2	m/mK	2.2x10 ⁻⁵	2.2x10 ⁻⁵
Flammability* (at thickness h)	UL-94	class	V-0	V-0
Tested thickness (h)	UL-94	mm	0.36	0.36
Electrical Properties				
Dielectric strength (t=1.6mm)	IEC 60243-1	kV/mm	16	16
Dielectric constant, 1MHz	IEC 60250	-	4	4
Dissipation factor, 1MHz	IEC 60250	-	0.002	0.002
Volume resistivity	IEC 60093	Ohm*cm	10 ¹⁶	10 ¹⁶
Comparative tracking index (CTI)	IEC 60112	Volt	170	170
Arc resistance	ASTM D495	sec.	125	125
Processing Conditions				
Cylinder temperature		°C	300-340	300-340
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

