Color & Comfort

DIC.PPS
Polyphenylene Sulfide

June, 2024

FZ-820-DE

■ **Product Summary: FZ-820-DE is a glass fiber reinforced impact modified PPS compound which is specially formulated to have excellent adhesion to epoxy adhesives, thermal shock resistance and good flow in thin walls.**

■ **Color: Black**

Engineering Properties

Properties	Test Method	Unit	Typical value
General Information			GF20% Good adhesion with epoxy resin
Physical			
Density	ISO 1183-1	g/cm³	1.42
Water absorption, 23˚C /24hrs.	ISO 62	%	0.07
Mold shrinkage [a]	ISO 294-4	%	0.5/0.8
Mechanical			
Tensile strength	ISO 527-1,2	MPa	130
Tensile modulus	ISO 527-1,2	GPa	8.5
Tensile strain at break	ISO 527-1,2	%	2.2
Flexural strength	ISO 178	MPa	200
Flexural modulus	ISO 178	GPa	8.0
Flexural strain at break	ISO 178	%	2.7
Charpy impact strength,			
notched	ISO 179/1eA	kJ/m²	9
unnotched	ISO 179/1eU	kJ/m²	55
Co-eff. of friction [b], static/dynamic	-	-	0.35/0.35
Thermal			
Heat deflection temperature, 1.80MPa	ISO 75-1,2	˚C	240
Co-eff. of linear thermal expansion [a], -50~50 ˚C	ISO 11359-2	x 10^{-5}/K	2.0/6.0
Co-eff. of linear thermal expansion [a], 100~200 ˚C	ISO 11359-2	x 10^{-5}/K	2.0/13.0
Flammability [c]/thickness (mm)	UL-94	-	-
Electrical			
Dielectric strength, t=1.0mm	IEC 60243-1	kV/mm	30
Dielectric constant, 1MHz	IEC 60243-2-1	-	4
Dissipation factor, 1MHz	IEC 60243-2-1	-	0.007
Comparative Tracking Index (CTI)	IEC 60112	V	175
Volume resistivity	IEC 60243-3-1	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

DIC Corporation