

# Ranger PBT PBT-403-M-G50

Polybutylene Terephthalate  
Beijing Ranger Chemical Co., Ltd.

Message:

Unreinforced grades have abundant strength and flexibility, and have strong characteristics against brittleness. UL-certified slow-burning(94HB) and self-extinguishing grades(94V-0,V-2) exist, and electrical properties exhibited are the highest of any thermoplastic. Low water absorption is exhibited, and excellent electrical properties(CTI and GWIT) are retained over extended periods of usages, even with widely varied temperature and humidity conditions.

The surface of molded products is smooth, and a low coefficient of friction is exhibited.As the amount of froction is low, PBT is suitable for use in application requiring friction and wear properties.

The material is exceptionally reliable, with small in-use dimensional variation, and superior molding stability and dimensional precision.

Long-term chemical resistance is exceptional, and at room temperature, there is almost no degradation in properties after.

Both unreinforced and reinforced grades exhibit exceptional flowability, and excellent processability.

Application:VCD drive frames\ Connectors\ Trimmers\ Switch buttons for gas-fired instantaneous water heaters\ Relay blocks\ Driers\ Rectifiers\ Outer handles\ Height sensor cases\ Door mirror stays\ Drive component housings\ Energy saving lamp.

General Information			
UL YellowCard	E255317-500386		
Features	Environmentally Sound		
	Flame Retardant		
	Good Chemical Resistance		
	Good Dimensional Stability		
	Good Electrical Properties		
	Good Flexibility		
	Good Flow		
	Good Processability		
	Good Surface Finish		
	High Heat Resistance		
	High Strength		
	Low Friction		
	Low to No Water Absorption		
Uses	Automotive Applications		
	Electrical/Electronic Applications		
	Housings		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.71	g/cm³	ASTM D792
Molding Shrinkage - Flow	0.30 to 0.40	%	ASTM D955
Water Absorption (23°C, 24 hr)	0.030	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method

Tensile Strength (Yield)	130	MPa	ASTM D638
Flexural Modulus	11000	MPa	ASTM D790
Flexural Strength	215	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength	15	kJ/m <sup>2</sup>	ASTM D256
Unnotched Izod Impact Strength	80	kJ/m <sup>2</sup>	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	222	°C	
1.8 MPa, Unannealed	209	°C	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity (2.00 mm)	1.3E+16	ohms·cm	ASTM D257
Dielectric Strength (2.00 mm)	22	kV/mm	ASTM D149
Dielectric Constant (50 Hz)	3.20		ASTM D150
Dissipation Factor (50 Hz)	0.020		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.800 mm	V-0		
1.60 mm	V-0		

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