ESTER INDUSTRIES LTD.

Product Data Sheet
ESTOPLAST EP4020WW23
[PBT-GF-FR] Compound

Product Description

Polybutylene Terephthalate - Flame retardant, Glass Fiber Reinforcement, 20%

Product Applications

Automotive: Interior Parts and E&E Parts

Electrical & Electronic: CFL Parts, LED accessories, Electrical enclosure, and Fuse box

General

Material Status	• Commercial : Active	
Filler/Reinforcement	• Glass Fiber reinforcement , 20%	
Forms	• Pellets	
Additive	• Mold Release	Flame Retardant
Appearance	• White	
Processing Method	• Injection molding	

Physical	Typical Value	Unit	Test Method
Specific Gravity	1.58	-	ASTM D-792
Water Absorption			
Saturation, 23°C	0.3	%	ISO-62
Equilibrium, 23°C, 50%RH	0.15	%	

Mechanical	Dry	Unit	Test Method
Tensile Stress (Break)	100	MPa	ASTM D-638
Tensile Strain (Break)	3.5	%	ASTM D-638
Flexural Strength	160	MPa	ASTM D-790
IZOD Impact Strength (23°C)			
Notch	45	J/m	ASTM D-256A

Thermal	Dry	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa Unannealed	210	°C	ASTM D-648
1.8 MPa Unannealed	195	°C	ASTM D-648

Flammability	Dry	Unit	Test Method
Glow Wire Flammability Index			
1.5mm	960	°C	IEC60695-2-12

Electrical	Dry	Unit	Test Method
Volume Resistivity	$1.50E^{+}16$	Ohm-cm	IEC 60093

Injection Molding – EP4020WW23

Drying Conditions

Drying Time(hour)	Temperature	Remarks
3-4	110-120°C	Temperature should not be more than 120°C to avoid discoloration Moisture content after drying should be <0.1% Avoid sudden cooling of dry pellet

Injection Molding Temperatures (°C)				
Mold	Melt	Nozzle	Centre	Feed zone
100 – 120	240 – 250	250 -260	250 -260	235-240

Physical form and storage

ESTOPLAST EP is supplied in pellet form. It should be pre-dried as per the guideline mentioned above prior to molding. Standard packing size is 25kg. In order to prevent moisture pick up and contamination, supplied packaging should be kept closed and undamaged.

Product Safety

ESTOPLAST EP is thermally stable up to 280°C and does not give rise to hazardous material due to degradation or evolution of gases and vapors. ESTOPLAST EP decomposes above 350°C and gives unsaturated hydrocarbons and small quantity of aldehydes.
For more information on safety, refer individual product MSDS. Available on request.

Note

All information supplied in this publication is based on our current knowledge and experience. The data provided fall within the normal range of product properties and relate only to the specific material designed. The data provided should not be used to establish specification limits or used alone as the basis of design. ESTER assumes no liability and makes no warranties of any kind, expressed or implied, whatsoever in respect of application, processing or use made of aforementioned information or product.