

Beetle® PBTS120S

Polybutylene Terephthalate

Teknor Apex Company (Chem Polymer)

Technical Data

Product Description

PBTS120S is a 20% glass sphere filled PBT injection moulding grade. It offers uniform shrinkage, increased surface hardness and good scratch resistance whilst retaining good surface aesthetics.

General

Material Status	• Commercial: Active
Literature ¹	• Technical Datasheet
Search for UL Yellow Card	• Teknor Apex Company (Chem Polymer) • Beetle®
Availability	• Europe • North America
Filler / Reinforcement	• Glass Bead, 20% Filler by Weight
Features	• Good Surface Finish • Pleasing Surface Appearance • Medium Hardness • Scratch Resistant
Forms	• Pellets
Processing Method	• Injection Molding

Physical	Nominal Value Unit	Test Method
Density	1.43 g/cm³	ISO 1183
Molding Shrinkage ³	1.2 to 1.6 %	Internal Method

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus	3300 MPa	ISO 527-2
Tensile Stress (Break)	60.0 MPa	ISO 527-2
Tensile Strain (Break)	4.0 %	ISO 527-2

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength	3.5 kJ/m²	ISO 179
Charpy Unnotched Impact Strength	25 kJ/m²	ISO 179

Thermal	Nominal Value Unit	Test Method
Heat Deflection Temperature		
0.45 MPa, Unannealed	180 °C	ISO 75-2/B
1.8 MPa, Unannealed	75.0 °C	ISO 75-2/A

Electrical	Nominal Value Unit	Test Method
Surface Resistivity	1.0E+15 ohm	IEC 60093
Volume Resistivity	1.0E+13 ohm·cm	IEC 60093
Electric Strength	20 kV/mm	IEC 60243-1
Comparative Tracking Index	225 V	IEC 60112

Flammability	Nominal Value Unit	Test Method
Oxygen Index	21 %	ISO 4589-2

Injection	Nominal Value Unit
Drying Temperature	120 °C
Drying Time	4.0 hr
Rear Temperature	240 to 260 °C
Middle Temperature	240 to 260 °C
Front Temperature	240 to 260 °C
Processing (Melt) Temp	< 270 °C
Mold Temperature	70.0 to 90.0 °C
Injection Rate	Moderate
Screw Speed	50 to 200 rpm

Injection Notes

Back Pressure: Low
Injection Pressure: High