

# Beetle<sup>®</sup> PBTS400

## Product Description

PBTS400 is an unfilled, heat and light stabilised general purpose PBT injection moulding grade.

## Provisional Technical Data

Property	Test Procedure	Units	
<b>General Properties</b> Specific gravity Filler content	ISO 1183	g/cm <sup>3</sup> %	1.30 -
<b>Thermal Properties</b> Mould shrinkage Deflection temperature @ 1.8 MPa	Internal ISO 75	% °C	2.2* 55
<b>Flammability</b> Glow wire rating Oxygen Index	IEC 695-2-1 ISO 4689	°C %	650 21
<b>Mechanical Properties</b> Tensile strength Tensile modulus Elongation @ break Flexural strength Flexural modulus Charpy impact strength - notched Charpy impact strength - unnotched	ISO 527 ISO 527 ISO 527 ISO 178 ISO 178 ISO 179 ISO 179	MPa GPa % MPa GPa kJ/m <sup>2</sup> kJ/m <sup>2</sup>	60 <sup>B</sup> 2.5 20 <sup>B</sup> 70 2.6 5.0 DNB
<b>Electrical Properties</b> Volume resistivity Surface resistivity Electric strength ( 3mm ) Comparative tracking index	IEC 93 IEC 93 IEC 243 IEC 112	log ohm cm log ohm kV/mm V	18 16 12 600

<sup>B</sup> At break

\* Denotes Teknor Apex test result – see comments regarding mould shrinkage.

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## Processing conditions

Recommended moulding conditions for optimum appearance and properties are as follows:

Barrel temperature	240 - 260°C
Mould temperature	70-90°C
Melt temperature	<270°C
Screw speed	50 -200 revs/minute
Back pressure	Low
Injection speed	Medium
Injection pressure	High

PBT materials are hygroscopic and very sensitive to moisture content during processing. Unlike many other materials, excessive moisture may not give rise to the appearance of splash marks on the surface of mouldings, but hydrolytic degradation of the melt can lead to significant impairment of properties, characterised most noticeably by embrittlement of the mouldings and reduced melt viscosity. **Adequate pre-drying is therefore essential.**

Drying should ideally be carried out in a vacuum oven or a dehumidified air drier. The recommended drying time for dehumidified air dryers being 4 hours at 120°C. Drying times may need to be extended if the material has become very wet.

## Mould shrinkage

Mould shrinkage is significantly influenced by many factors including wall thickness, gating, component shape and moulding conditions.

The range values stated were determined from specimen bar mouldings of 1.5mm to 4mm wall thickness. They are provided as a guide for comparison purposes only and no guarantee should be inferred from their inclusion. (Specimens measured in the dry state, 24 hours after moulding).

## Packaging and storage

Standard pack:	25 kg moisture proof sack
Standard pallet:	40 x 25kg ( 1000 kg )
Storage:	Keep in dry, well ventilated storage areas away from sources of heat.

## Health and safety

A safety data sheet on this product is available on request.

*This data is typical information for a natural material and does not constitute an agreed sales specification.*