

TECACOMP® PBT TC white 4037V - Compounds

Chemical Designation

PBT (Polybutylene terephthalate)

Colour

white

Density

1.73 g/cm³

Fillers

mineral filler

Main features

- high thermal conductivity
- very good electrical insulation

Target Industries

- electrical engineering
- LED lighting technology
- mechanical engineering
- automotive industry

The compound is in the phase of further development. The characteristic values of this product may change.

Mechanical properties	parameter	value	unit	norm	comment
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Modulus of elasticity (tensile test)	50 mm/min	7300	MPa	DIN EN ISO 527-1	
Tensile strength	50 mm/min	72	MPa	DIN EN ISO 527-1	
Elongation at break	50 mm/min	2	%	DIN EN ISO 527-1	
Impact strength (Charpy)		40	kJ/m ²	DIN EN ISO 179-1eU	

Thermal properties	parameter	value	unit	norm	comment
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Glass transition temperature		60	°C	DIN 53765	
Melting temperature		225	°C	DIN 53765	
Service temperature	long term	110	°C	-	
Service temperature	short term	170	°C	-	
Specific heat		0,99	J/(g*K)	DIN EN 821	
Thermal conductivity	in-plane	1,0	W/(K*m)	DIN EN 821	
Thermal conductivity	through-plane	1,0	W/(K*m)	DIN EN 821	
Thermal diffusivity	in-plane	0,5	mm ² /s	DIN EN 821	
Thermal diffusivity	through-plane	0,5	mm ² /s	DIN EN 821	

Electrical properties	parameter	value	unit	norm	comment
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Specific surface resistance		4,5 x 10 ¹²	Ω	DIN EN 61340-2-3	
Specific volume resistance		3,1 x 10 ¹²	Ω*m	DIN EN 61340-2-3	

Other properties	parameter	value	unit	norm	comment
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Molding shrinkage	longitudinal	1,48	%	DIN EN ISO 294-4	
Molding shrinkage	transverse	1,47	%	DIN EN ISO 294-4	
Melt flow index (MFI)	280 °C / 5 kg	42	g/10 min	DIN EN ISO 1133	
MVR	280 °C / 5 kg	50	cm ³ /10 min	DIN EN ISO 1133	
Bulk density		0,92	g/cm ³	EN ISO 60	

Processing parameter	parameter	value	unit	norm	comment
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Cylinder/processing temperature		240 - 290	°C	-	
Mould temperature		130	°C	-	
Material temperature		270 - 280	°C	-	

→ This material can be processed as a thermoplastic taking the normal technical provisions into account. The above mentioned information refers exclusively to the injection moulding process.

→ Back pressure and injection rate should be adjusted to the component geometry accordingly. The optimum processing temperature depends upon the respective geometry of the moulded part and can be different from machine to machine.

Predrying	parameter	value	unit	norm	comment
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Permissible residual moisture content		< 0,02	%	-	
Drying temperature		120	°C	-	
Drying time		3 - 6	h	-	

→ In order to achieve optimum mechanical properties, pre-drying of the material is recommended with the parameters mentioned above.

→ Granulate should preferably be stored in dry rooms at normal temperatures and be protected from direct sunlight.

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