TECACOMP PS ELS 1014796 - Compounds

Chemical Designation
PS (Polystyrene)

Colour
black

Density
1.06 g/cm^3

Fillers
carbon fibres

Mechanical properties	*parameter*	*value*	*unit*	*norm*	*comment*
Tensile strength	50 mm/min	35	MPa	DIN EN ISO 527-1	
Modulus of elasticity (tensile test)	50 mm/min	7000	MPa	DIN EN ISO 527-1	
Elongation at break (tensile test)	50 mm/min	< 1	%	DIN EN ISO 527-1	
Impact strength (Charpy)		6,5	kJ/m^2	DIN EN ISO 179-1eU	

Thermal properties	*parameter*	*value*	*unit*	*norm*	*comment*
Glass transition temperature		90	°C	DIN 53765	
Service temperature	long term	55	°C	-	
Service temperature	short term	70	°C	-	

Electrical properties	*parameter*	*value*	*unit*	*norm*	*comment*
surface resistivity		3 x 10^9	Ω	ASTM D 257 1)	(1) DIN EN 61340-2-3

Other properties	*parameter*	*value*	*unit*	*norm*	*comment*
Molding shrinkage	longitudinal	0,27	%	DIN EN ISO 294-4	
Molding shrinkage	transverse	0,31	%	DIN EN ISO 294-4	
Melt flow index (MFI)	200 °C / 5 kg	8	g/10 min	DIN EN ISO 1133	
Bulk density		0,54	g/cm^3	EN ISO 60	

Processing parameter	*parameter*	*value*	*unit*	*norm*	*comment*
Cylinder/processing temperature		180 - 280	°C	-	
Mould temperature		40 - 100	°C	-	
Material temperature		220 - 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.
- Processing should be carried out as gently as possible, in order to maintain the maximum fibre length in the component. 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*
Permissible residual moisture content		< 0,1	%	-	
Drying temperature		120 - 150	°C	-	
Drying time		4 - 6	h	-	

- To achieve optimum mechanical properties, it is recommended to pre-dry the material with the above mentioned parameters.
- Information on storage and shelf life: The granules must be stored in dry, normally tempered rooms and in closed containers. For moisture-sensitive materials, the granules must be sealed airtight. Protection against direct sunlight must be guaranteed. The granules are usually subject to the requirements of no shelf life limitation. Shelf Life may be limited by some additives.

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