TECACOMP PA66 TRM black 1015061 - Compounds

Chemical Designation
PA 66 (Polyamide 66)

Colour
black

Density
1.3 g/cm^3

Fillers
carbon fibres, PTFE

Main features
- very good bearing and wear properties

Target Industries
- automotive industry
- mechanical engineering

Mechanical properties	parameter	value	unit	norm		comment
Tensile strength	50 mm/min	150	MPa	DIN EN ISO 527-1		
Modulus of elasticity (tensile test)	50 mm/min	9000	MPa	DIN EN ISO 527-1		
Elongation at break (tensile test)	50 mm/min	3,0	%	DIN EN ISO 527-1		
Impact strength (Charpy)		35	kJ/m^2	DIN EN ISO 179-1eU		
Thermal properties	**parameter**	**value**	**unit**	**norm**		**comment**
Glass transition temperature		5 / 72	°C	DIN 53765	1)	(1) moist/dry
Melting temperature		260	°C	DIN 53765		
Heat distortion temperature	HDT A	250	°C	ISO-R 75 Method A		
Heat distortion temperature	HDT B	260	°C	ISO-R 75 Method B		
Service temperature	short term	170	°C	-		
Service temperature	long term	110	°C	-		
Thermal expansion (CLTE)	longitudinal (at 23 - 45 °C)	24	10^{-6} K^{-1}	DIN EN ISO 11359-1;2		
Thermal expansion (CLTE)	transverse (at 23 - 45 °C)	108	10^{-6} K^{-1}	DIN EN ISO 11359-1;2		
Thermal expansion (CLTE)	longitudinal (at 70 - 120 °C)	22	10^{-6} K^{-1}	DIN EN ISO 11359-1;2		
Thermal expansion (CLTE)	transverse (at 70 - 120 °C)	142	10^{-6} K^{-1}	DIN EN ISO 11359-1;2		
Thermal conductivity	in-plane	0,6	W/(K*m)	ISO 22007-4:2008		
Thermal conductivity	through-plane	0,3	W/(K*m)	ISO 22007-4:2008		
Electrical properties	**parameter**	**value**	**unit**	**norm**		**comment**
volume resistivity		1,3 x 10^1	Ω*m	DIN EN ISO 3915		
Other properties	**parameter**	**value**	**unit**	**norm**		**comment**
Water absorption	23 °C / 50 % relative humidity up to saturation	1,9	%	DIN EN ISO 62		(1) No listing at UL (Yellow Card).
Molding shrinkage	longitudinal	0,37	%	DIN EN ISO 294-4		
Molding shrinkage	transverse	1,04	%	DIN EN ISO 294-4		
Flammability (UL94)		HB		DIN IEC 60695-11-10;	1)	
Melt flow index (MFI)	280 °C / 5 kg	57	g/10 min	DIN EN ISO 1133		
MVR	280 °C / 5 kg	50	cm³/10 min	DIN EN ISO 1133		
Bulk density		0,64	g/cm^3	EN ISO 60		
Viscosity number	solution 0,005 g/ml sulphuric acid	150	ml/g	DIN EN ISO 307		
Processing parameter	**parameter**	**value**	**unit**	**norm**		**comment**
Cylinder/processing temperature		280 - 300	°C	-		
Mould temperature		80 - 120	°C	-		
Material temperature		290 - 300	°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		80	°C	-	
Drying time		4 - 8	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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