

Preliminary Data Sheet

Copper filled PLA
 Latest revision: May 2015

Properties	Test methods	Units	copperFill
Physical properties			
Specific gravity	ISO 1183	g/cm ³	4,0
Water absorption at saturation, 23 °C	ISO 62	%	1,8
Humidity absorption, 23 °C/50 % r.h.	ISO 62	%	0,3
Mould shrinkage (flow direction, 3 mm)	ISO 2577	%	0,15 - 0,35
Mechanical properties			
Tensile strength (max.)	ISO 527	MPa	25
Elongation at break	ISO 527	%	3 - 10
Flexural strength	ISO 178	MPa	40
Flexural modulus	ISO 178	GPa	7,0
IZOD impact strength, notched	ISO 180/1eA	kJ/m ²	5,5
IZOD impact strength, unnotched	ISO 180/1eU	kJ/m ²	10
Thermal properties			
Heat distortion temperature (1,81 MPa)	ISO 75	°C	-
Relative temperature index, 3 mm, with impact	UL 746B	°C	-
Coefficient of linear thermal expansion	ISO 11359	K-1·10 ⁻⁵	-
Flammability			
Burning behaviour	IEC 60695-11-10	-	HB @ 3,2 mm
UL recognition	UL94	-	-
Electrical properties			
Surface resistivity	ASTM D257	/sq	10 ¹¹
Comparative tracking index	IEC 60112	V	-
Glow wire rating, 1,6 mm	IEC 695-2-1	°C	-
Processing conditions (injection moulding)			
Drying conditions (dehumidifying drier)	: 4 Hours @ 60 °C		
Maximum allowable moisture content	: 0,05 %		
Melt temperature	: 160 - 230 °C		
Mould temperature	: 20 - 60 °C		
Screw speed	: 0,1 - 0,2 m/s		
Back pressure	: 0 - 1,0 MPa		
Injection pressure	: Keep to a minimum		
Injection speed	: Fast ram speed		
Hold pressure	: Keep to a minimum		
colorFabb	Tel:		+ 31 (0)77 - 398 09 09
Noorderpoort 45	Fax:		+ 31 (0)77 - 397 14 14
5916 PJ VENLO	Email:		sales@colorfabb.com
The Netherlands	Website:		colorfabb.com

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