TECACOMP PP HTE PW black 1014974 - Compounds

Chemical Designation
PP (Polypropylene)

Colour
black

Density
1.96 g/cm^3

Fillers
graphite

Main features
- high electrical conductivity
- high thermal conductivity
- very good chemical resistance
- for hot compression moulding

Target Industries
- bipolar plates for fuel cells
- separator plates for redox-flow batteries

Mechanical properties	parameter	value	unit	norm		comment
Flexural strength		41	MPa	DIN EN ISO 178		
Modulus of elasticity (flexural test)		12300	MPa	DIN EN ISO 178		

Thermal properties	parameter	value	unit	norm		comment
Glass transition temperature		0	°C	-	1)	(1) literature value (2) literature value (3) literature value (4) literature value
Melting temperature		165	°C	-	2)	
Heat distortion temperature		148	°C	ISO-R 75 Method A		
Service temperature	short term	-30 - 130	°C	-	3)	
Service temperature	long term	-30 - 90	°C	-	4)	
Thermal conductivity	in-plane	66	W/(K*m)	ISO 22007-4:2008		
Thermal conductivity	through-plane	20	W/(K*m)	ISO 22007-4:2008		

Electrical properties	parameter	value	unit	norm	comment
Specific electrical conductivity		168	S/cm	DIN EN ISO 3915	
volume resistance		5,95 x 10^{-3}	Ω*cm	DIN EN ISO 3915	

Other properties	parameter	value	unit	norm	comment
Water absorption	23 °C / 50 % relative humidity up to saturation	< 0,1	%	DIN EN ISO 62	

→ Please refer to the separately enclosed processing guidelines for detailed processing instructions.

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Date: 2023/12/01

Version: AL