

TECACOMP PP HTE PW black 1014974 - Compounds

Chemical Designation

PP (Polypropylene)

Colour

black

Density

1.96 g/cm³

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					
	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Flexural strength		48	MPa	DIN EN ISO 178	
Thermal properties					
	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Glass transition temperature		0	°C	-	1) (1) literature value
Melting temperature		165	°C	-	2) (2) literature value
Heat distortion temperature		148	°C	ISO-R 75 Method A	(3) literature value
Service temperature	short term	-30 - 130	°C	-	3) (4) literature value
Service temperature	long term	-30 - 90	°C	-	
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					
	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Specific electrical conductivity	in-plane	168	S/cm	DIN EN ISO 3915	
volume resistance		5,9 x 10 ⁻³	Ω*cm	DIN EN ISO 3915	
Other properties					
	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
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.

Our information and statements reflect to current state of our knowledge and shall inform about the products and their applications. They do not assure or guarantee chemical resistance, quality of products and their merchantability in a legally binding way. Our products are not defined for the use in medical or dental implants. Existing commercial patents have to be observed. The corresponding values and information are no minimum or maximum values, but guideline values that can be used primarily for comparison purposes for material selection. These values are within the normal tolerance range of product properties and do not represent guaranteed property values. Therefore they shall not be used for specification purposes. Unless otherwise noted, these values were determined by tests on injection moulded samples, dry as moulded. The customer is solely responsible for the quality and suitability of products for the application and has to test usage and processing prior to use. Data sheet values are subject to periodic review, the most recent update can be found at ensingerplastics.com. Technical changes reserved.