

Technical Data Sheet

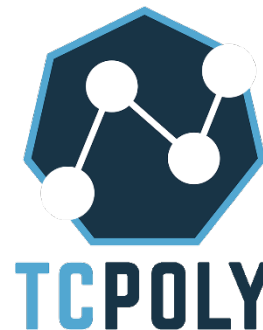
Ice9™ PETG

Thermally conductive, electrically non-insulating plastic

Filament product code: TC-PETG-175-1000

Pellet product code: TC-PETG-000-1000

Properties based on 3D printed samples



GENERAL PROPERTIES		VALUE				
Base Material		Polyethylene terephthalate glycol				
Color		Dark gray				
Density		1350 kg/m ³				
THERMAL PROPERTIES		METRIC		ENGLISH		ASTM
Thermal conductivity, in-plane		3	W/m-K	54	BTU·in/hr·ft ² ·°F	E1461
Thermal conductivity, through-plane		0.8	W/m-K	17	BTU·in/hr·ft ² ·°F	E1461
Specific heat		1150	J/kg-K	0.27	BTU/lb·°F	E1269
Coefficient of thermal expansion		51	ppm/°C	28	ppm/°F	E831
Heat deflection temperature, 0.455 MPa		120	°C	248	°F	D648
Max. continuous temperature		150	°C	302	°F	*
MECHANICAL PROPERTIES		METRIC		ENGLISH		ASTM
Shore Hardness		75	D			D785
Flexural Modulus		1.9	GPa	275	ksi	D638
Tensile Strength @ Break		51	MPa	7	ksi	D638
Elongation @ Break		5	%	5	%	D638
Impact strength, Izod notched @ 23°C		95	J/m	1.8	lb-ft/in	D256
ELECTRICAL PROPERTIES		METRIC				ASTM
Volume resistivity		>10 ⁸	Ω-cm			D257

* Highest temperature recommended for operation of more than 1 hour and is based internal testing and not any recognized standard.

DISCLAIMER: This material is a proprietary composition of TCPoly, Inc. U.S. and international patents pending. The testing and product data provided in this data sheet are preliminary in nature accurate. The data contained herein are provided for preliminary informational purposes only and for initial evaluation of the product. As a result, they are not appropriate for the purpose of developing a final specification and should not be relied on for such specification purposes. TCPoly extends no warranties, makes no representations and assumes no responsibility as to the accuracy or suitability of this information or this product for any purchaser's or user's use or for any consequence of its use. TCPoly disclaims any warranty of merchantability or warranty of fitness for any particular use. All statements, technical information and recommendations contained herein are based on seller's or manufacturer's tests and the tests of others. Judgment as to the suitability of information herein for the user's purposes are necessarily the user's responsibility. Users shall determine the suitability of the products for the intended application.

Technical Data Sheet

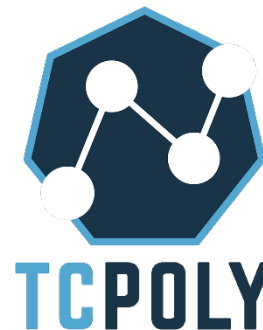
Ice9™ PETG

Thermally conductive, electrically non-insulating plastic

Filament product code: TC-PA-175-1000

Pellet product code: TC-PA-000-1000

Properties based on 3D printed samples



GENERAL PROPERTIES		VALUE	
Base Material		Polyethylene terephthalate glycol	
Color		Dark gray	
Filament diameter		1.75 ± 0.1 mm	
TEMPERATURE SETTINGS		VALUE	UNITS
Extruder temperature		255-290	°C
Bed temperature		70-90	°C
Chamber temperature		40-55	°C
Cooling fan		Bridging only, 60	%
SLICING SETTINGS		VALUE	UNITS
Print speed		60-150	mm/s
Layer height		0.2-0.7	mm
Retraction distance		5	mm
Extra restart distance		0.5	mm
Infill for best thermal performance		95-100	%
ADDITIONAL GUIDELINES			
Nozzle diameter		0.4-1.0 mm	
Extruder type		Direct drive or Bowden	
Print bed preparation		PEI or glue stick on glass	
Storage instructions		Sealed bag	
Drying instructions		4 hour @ 70°C	

DISCLAIMER: This material is a proprietary composition of TCPoly, Inc. U.S. and international patents pending. The testing and product data provided in this data sheet are preliminary in nature accurate. The data contained herein are provided for preliminary informational purposes only and for initial evaluation of the product. As a result, they are not appropriate for the purpose of developing a final specification and should not be relied on for such specification purposes. TCPoly extends no warranties, makes no representations and assumes no responsibility as to the accuracy or suitability of this information or this product for any purchaser's or user's use or for any consequence of its use. TCPoly disclaims any warranty of merchantability or warranty of fitness for any particular use. All statements, technical information and recommendations contained herein are based on seller's or manufacturer's tests and the tests of others. Judgment as to the suitability of information herein for the user's purposes are necessarily the user's responsibility. Users shall determine the suitability of the products for the intended application.