

Technical Data Sheet

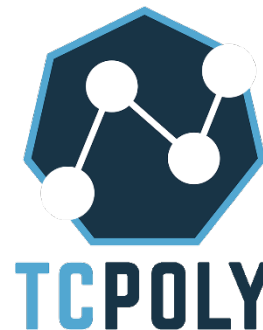
Ice9™ TPU

Thermally conductive, electrically non-insulating plastic

Filament product code: TC-TPU-175-1000

Pellet product code: TC-TPU-000-1000

Properties based on 3D printed samples



GENERAL PROPERTIES		VALUE				
Base Material		Thermoplastic polyurethane				
Color		Dark gray				
Density		1500 kg/m ³				
THERMAL PROPERTIES		METRIC		ENGLISH		ASTM
Thermal conductivity, in-plane		6	W/m-K	42	BTU·in/hr·ft ² ·°F	E1461
Thermal conductivity, through-plane		2	W/m-K	14	BTU·in/hr·ft ² ·°F	E1461
Specific heat		1300	J/kg-K	0.31	BTU/lb·°F	E1269
Coefficient of thermal expansion		80	ppm/ °C	44	ppm/°F	E831
Heat deflection temperature, 0.45 MPa		65	°C	149	°F	D648
Max. continuous temperature		110	°C	230	°F	*
MECHANICAL PROPERTIES		METRIC		ENGLISH		ASTM
Shore Hardness		88	A			D2240
Flexural modulus		95	MPa	15	ksi	D638
Tensile strength, Break		27	MPa	4	ksi	D638
Elongation at break		10	%	10	%	D638
Impact strength, Izod notched		No	break	No	break	D256
ELECTRICAL PROPERTIES		METRIC				ASTM
Volume resistivity		>10 ⁵	Ω-cm			D257

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

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