



TPI 系列複合材料物性表

compound datasheets

項目 Property		試驗法 ASTM Method	單位 Units	TPI, GF10, PTFE5	TPI, CF30, PTFE15	TPI, GF20	TPI FR, GF40	
一般性質	比重 Specific Gravity	D792	-	1.4	1.51	1.45	1.63	
	成型收縮率 Mold Shrinkage	D955	%	6.35mm截面	-	-	-	
				3.18mm截面	0.4~0.7	0.01~0.1	1	0.3
吸水率(24 hours) Water absorption, 24 hrs @ 23°C	D570	%	-	-	-	-		
機械性質	衝擊強度 Impact Strength	D256	J/m	3.18mm截面(缺口) Notched Izod	80	80	101	144
				3.18mm截面(無缺口) Unnotched Izod	908	614	881	1068
	伸張強度 Tensile Strength	D638	MPa	117	197	138	193	
	延伸率 Tensile Elongation	D638	%	4~6	1~2	3.5	2	
	伸張模數 Tensile Modulus	D638	MPa	5171	24132	7584	13790	
	彈性強度 Flexural Strength	D790	MPa	172	303	214	296	
	彈性模數 Flexural Modulus	D790	MPa	4826	20685	6895	13100	
洛氏硬度 Rockwell Hardness	D785	-	-	-	-	124 R		
熱性質	熱變形溫度 DTUL	D648	°C	at 264 psi (1.82 MPa)	>288	>316	288	>316
				at 66 psi (0.455 MPa)	-	-	-	-
	連續使用溫度 Continuous Use Temp.	UL-746B	°C	-	-	-	-	
	線性熱膨脹係數 Coefficient of Linear Thermal Expansion	D 696	10 ⁻⁵ /°C	-	-	-	-	
防火等級 Flammability thickness	-	-	-	*V-0 @ 1.5 mm	*V-0 @ 1.5 mm	*V-0 @ 1.5 mm	V-0 @ 1.5 mm	
電氣性質	體積固有電阻 Volume Resistivity	D257	ohm-cm	>1e14	-	-	-	
	表面電阻 Surface Resistivity	D257	ohm/SQ	-	-	-	-	
	靜電消散(MIL-PRF-81705C) Static Decay	FTMS-4046.1	sec	-	-	-	-	

*Tested by factory.

Data are obtained from specimens molded under carefully controlled conditions from representative samples of the compound described herein. Properties may be materially affected by molding techniques applied and by the size and shape of the item molded. No assurance can be implied that all molded articles will have the same properties as those listed.