

TORAY PBT Resin "TORAYCON"

Property	Unit	Test method	HB grades				V0 Grades									
			Standard			High Flow	Standard					High strength		Low warpage		
			Non reinforced 1401X06	GF15% 1201G15	GF30% 1101G30	Non reinforced 1401X07	Non reinforced 1494X02	GF15% 1164G15NT2	GF15% 1164G15BT2	GF30% 1164G30NT2	GF30% 1164G30BT2	GF15% 1184GA15	GF30% 1184GA30N1/B1	GF30% 7164G30B		
Physical	Density	g/cm ³	ISO1183	1.31	1.42	1.55	1.31	1.43	1.57	1.57	1.69	1.69	1.55	1.63	1.62	
	Water absorption	%	ISO62	0.08	0.07	0.07	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07	
Mechanical	Tensile strength	Mpa	ISO527-1,2	Y55	100	145	Y55	Y64	106	106	140	140	110	140	138	
	Tensile strain at break	%	ISO527-1,2	tb 30.0	4.0	2.5	tb 10.0	tB8.0	2.2	2.2	2.2	2.2	3.3	2.4	2.8	
	Flexural strength	MPa	ISO178	90	170	220	85	105	160	160	205	205	170	220	190	
	Flexural modulus	Gpa	ISO178	2.5	5.6	9.6	2.5	2.9	6.5	6.5	10.5	10.5	5.5	9.5	7.5	
	Charpy impact	kJ/m ²	ISO179-1	4.5	5	10	3.5	2.5	5.6	5.6	6.5	6.5	5.5	9	7.5	
	Rockwell hardness	R.M scale	ISO2039-2	M75	M90	M91	M75	M82					M85	M85		
Thermal	Temperature of deflection under load	0.45Mpa 1.8Mpa	C° C°	ISO75-1,2	60	206	213	60	65	220 205	220 205	220 207	220 207	205	207	220 207
	Linear thermal expansion		× 10 ⁻⁵ /K	ISO11359-2	11.0	5.4	4.1	11.0	9.0	6.0	6.0	4.0	4.0	5.3	4.1	-
	Flammability		class/mm	UL94	HB/0.81mm	HB/0.81mm	HB/0.71mm	HB/0.81mm	V-0/0.38mm	V-0/0.38mm	V-0/0.38mm	V-0/0.75mm	V-0/0.75mm	V-0/0.75mm	V-0/0.75mm	V-0/0.8mm
Electrical	Electrical strength	kV/mm	IEC60243-1	17	20	23	17	26	27	27	27	27	27	27	27	-
	Arc resistance	s	ASTM D495	144	129	120	144	55	55	55	55	55	55	134	-	
	Relative permittivity		IEC60250	3.3	3.4	3.6	3.3	3.4	3.5	3.5	3.5	3.5	3.5	2	-	
	Comparative tracking index	UL index	UL746A	0	2	2	0	2	3	3	2	2	2	2	-	
	Volume resistivity	Ω·m	10 ¹⁴	IEC60093	8	4.2	5	8	2					5.6	11	
	Dielectric constant	50Hz 10 ⁶ Hz	-	IEC60250	3.3	3.3	3.7	3.3	3.4					3.6	4	
					3.3	3.4	4.2	3.3	3.4				3.8	3.8		
Dielectric Loss Tangent	50Hz 10 ⁶ Hz	-	IEC60250	0.002	0.002	0.002	0.002	0.001					0.002	0.001		
				0.02	0.02	0.02	0.02	0.02				0.02	0.02			
Moldability	Mold shrinkage	MD	%	Toray method	1.7	0.6	0.3	1.7	1.5	0.5	0.5	0.4	0.4	0.5	0.2	0.2
		TD	%		2.3	1.5	1	2.3	2	1.3	1.3	1.2	1.2	1.2	1.2	0.8
	Bar Flow (250°C, 93MPa, 1mmt)		X10 ⁻³ m	Toray method	103	80	96	159	97					140	136	