

TORAY PBT Resin "TORAYCON"

Property	Unit	Test method	HB grades						V0 Grades						Low warpage	
			Standard			High Flow			Standard			High strength				
			Non reinforced 1401X06	GF15% 1201G15	GF30% 1191G30	Non reinforced 1401X07	GF15% 1184G15NT2	GF30% 1184G30NT2	Non reinforced 1484X02	GF15% 1184G15BT2	GF30% 1184G30BT2	GF15% 1184GA15	GF30% 1184GA30MI/B1	GF15% 1184GA15		GF30% 1184GA30MI/B1
Density	g/cm ³	ISO1183	1.31	1.42	1.55	1.31	1.57	1.57	1.69	1.69	1.43	1.57	1.57	1.69	1.63	1.62
Water absorption	%	ISO62	0.08	0.07	0.07	0.08	0.07	0.07	0.07	0.08	0.07	0.07	0.07	0.07	0.07	0.07
Tensile strength	Mpa	ISO527-1,2	Y55	100	145	Y55	106	106	140	Y64	106	106	140	140	140	138
Tensile strain at break	%	ISO527-1,2	tb 30.0	4.0	2.5	tb 10.0	2.2	2.2	2.2	tb 8.0	2.2	2.2	2.2	2.2	2.4	2.8
Flexural strength	MPa	ISO178	90	170	220	85	160	160	205	105	160	160	205	205	220	190
Flexural modulus	Gpa	ISO178	2.5	5.6	9.6	2.5	6.5	6.5	10.5	2.9	6.5	6.5	10.5	10.5	9.5	7.5
Charpy impact	kJ/m ²	ISO178-1	4.5	5	10	3.5	5.6	5.6	6.5	2.5	5.6	5.6	6.5	6.5	9	7.5
Rockwell hardness	R.M scale	ISO2038-2	M75	M90	M91	M75	M82	M82	M85	M82	M82	M82	M85	M85	M85	M85
Temperature of deflection under load	0.45Mpa 1.8Mpa	ISO75-1,2	60	206	213	60	220	205	220	65	220	205	220	207	207	220
Linear thermal expansion	× 10 ⁻³ /K	ISO11359-2	11.0	5.4	4.1	11.0	6.0	6.0	4.0	9.0	6.0	6.0	4.0	4.0	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-0/0.75mm	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-0/0.8mm
Electrical strength	kV/mm	IEC60243-1	17	20	23	17	27	27	27	26	27	27	27	27	27	-
Arc resistance	s	ASTM D495	144	129	120	144	55	55	55	55	55	55	55	55	134	-
Relative permittivity		IEC60250	3.3	3.4	3.6	3.3	3.5	3.5	3.5	3.4	3.5	3.5	3.5	3.5	2	-
Comparative tracking index	UL index	UL746A	0	2	2	0	3	3	2	2	3	3	2	2	2	-
Volume resistivity	Ω·m×10 ¹⁴	IEC60093	8	4.2	5	8	2	2	2	2	2	2	2	2	11	-
Dielectric constant	50Hz 10 ⁶ Hz	IEC60250	3.3	3.3	3.7	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4	3.8
Dielectric Loss Tangent	50Hz 10 ⁶ Hz	IEC60250	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.001	0.002	0.002	0.002	0.002	0.001	0.002
Mold shrinkage	MD TD	Toray method	1.7 2.3	0.6 1.5	0.3 1	1.7 2.3	0.5 1.3	0.5 1.3	0.4 1.2	1.5 2	0.5 1.3	0.5 1.3	0.4 1.2	0.4 1.2	0.2 1.2	0.2 0.8
Bar Flow (250°C, 93MPa, 1mmt)	X10 ⁻³ m	Toray method	103	80	96	159	97	97	97	97	97	97	97	97	136	136