

[Materials data sheet] NOVALLY B PBT/ABS

Properties	Test method	Test condition	Unit	General purpose				GF-reinforced					Flame retardant										Enhanced surface appearance grades (PBT/ABS)		Enhanced surface appearance grades (PBT/PET)	
				Standard			Impact resistant	Standard		Heat resistant	Heat resistant	Low warpage	Standard				Heat resistant			Heat resistant/ Easy flow	Low warpage	Heat resistant • Low warpage	General purpose	Flame retardant	General purpose	
				-	-	-	-	GF20%	GF30%	GF15%	GF30%	Filler40%	-	GF20%	GF30%	GF30%	GF15%	GF30%	GF30%	GF30%	Filler40%	Filler30%	GF15%	GF15%	GF18%	
				B1300 B1300F	B1500 B1500F	B1700 B1700F	B14M0	B2504	B2506	B2703	B2706	B3708 (Type K)	B45M0	B5524	B5526	B5546 (Type D)	B5723	B5726	B5746 (Type D)	B5746 (Type J)	B6528	B6726	B27B3 (Type M1)	B50B3	BE2703 (Type K)	
Mold shrinkage	ASTM D955		%	0.5 - 0.8	0.7 - 0.9	1.2 - 1.4	0.6 - 0.9	0.3 - 0.5	0.2 - 0.4	0.4 - 0.7	0.3 - 0.6	0.2 - 0.4	0.6 - 0.8	0.25 - 0.45	0.2 - 0.4	0.2 - 0.4	0.4 - 0.6	0.3 - 0.5	0.3 - 0.5	0.3 - 0.5	0.2 - 0.3	0.2 - 0.4	0.4 - 0.6	0.4 - 0.6	0.2 - 0.4	
Tensile strength	ISO 527		MPa	38	42	47	40	86	103	81	115	100	44	95	110	110	91	120	115	120	95	93	80	80	100	
Flexural strength	ISO178		MPa	57	67	74	60	140	150	130	170	160	70	135	160	170	130	185	185	180	150	155	115	125	150	
Flexural modulus	ISO178		MPa	1800	2200	2400	1900	6000	8400	5200	8900	11500	2500	6600	9200	9500	5600	9700	9700	9700	11000	9700	5000	5000	6000	
Charpy notched impact strength	ISO179/1eA	23℃	kJ/m ²	10	3	3	50	8	9	6	8	7	7	7	8	8	6	8	6	8	7	6	6	4	5	
Izod notched Impact strength	ASTM D256	23℃ /6.4mm	J/m	60	30	30	-	80	90	60	80	60	30	70	80	80	60	80	60	70	70	60	-	-	-	
Deflection temperature under load	ISO 75	1.80MPa	℃	80	80	75	80	130	140	160	190	190	85	130	140	145	175	190	190	190	140	185	155	160	180	
	ASTM D648	1.82MPa/6.4mm		90	90	85	-	125	150	185	200	200	100	125	155	150	185	200	200	200	155	195	180	-	-	
	ISO 75	0.45MPa		100	100	150	-	200	205	205	210	210	115	200	210	210	210	210	220	220	220	205	215	200	210	-
	ASTM D648	0.46MPa/6.4mm		100	100	150	-	200	205	205	210	210	115	200	210	210	210	210	220	220	220	205	215	200	-	-
Ball pressure registration temperature	-		℃	-	105	-	-	-	-	180	-	-	-	-	160	-	190	200	-	-	-	-	190	-	-	

Coefficient of thermal expansion	ISO 11359	MD TD	×10 ⁻⁵ /°C	10 -	10 -	10 -	10 -	3 10	2 10	3 10	2 10	3 8	10 -	3 10	2 10	2 10	3 10	2 10	2 10	2 10	3 8	3 8	3 10	-	-
Flamability *	UL94		-	-	HB	HB	-	HB	HB	HB	HB	HB	V-0/ 1.2mm	V-0/1.5mm 5VA/2.9mm	V-0/ 1.5mm	V-0/ 1.5mm	V-0/1.5mm	V-0/1.5mm 5VA/2.0mm	V0/1.5mm 5VA/2.0mm	V-0/1.5mm 5VA/2.0mm	V-0/1.6mm	V-0/1.5mm	HB	V-0/1.5mm	-
Dielectric strength	ASTM D149	1.5mm	MV/m	-	31	28	-	35	35	35	35	24	31	30	30	27	29	29	26	26	27	26	-	-	-
Arc resistance *	ASTM D495	3.0mm	sec (PLC)	- -	101 (6)	128 (5)	- -	85 (6)	85 (6)	- -	- -	124 (5)	79 (6)	69 (6)	69 (6)	- (6)	- (6)	- (6)	72 (6)	72 (6)	69 (6)	77 (6)	-	-	-
Hot wire ignition *	UL746A	1.5mm	sec (PLC)	- -	13 (4)	10 (4)	- -	50 (2)	50 (2)	13 (4)	13 (4)	13 (4)	18 (3)	24 (3)	24 (3)	31 (2)	27 (3)	27 (3)	25 (3)	25 (3)	22 (3)	22 (3)	-	-	-
High ampere arc ignition *	UL746A	1.5mm	(PLC)	- -	150 (0)	150 (0)	- -	113 (1)	113 (1)	68 (1)	68 (1)	19 (3)	150 (0)	35 (2)	35 (2)	19 (3)	25 (3)	25 (3)	33 (2)	33 (2)	39 (2)	75 (1)	-	-	-
High voltage tracking rate *	UL746A	3.0mm	mm/min (PLC)	- -	17 (1)	19 (1)	- -	25 (1)	25 (1)	1.2 (0)	1.2 (0)	15 (1)	5 (0)	187 (4)	187 (4)	208 (4)	87 (3)	87 (3)	150 (4)	150 (4)	288 (4)	65 (2)	-	-	-
Comparative tracking Index *	IEC 112	3.0mm	V (PLC)	- -	600 (0)	600 (0)	- -	600 (0)	600 (0)	500 (1)	500 (1)	430 (1)	400 (1)	210 (3)	210 (3)	- (3)	225 (3)	225 (3)	220 (3)	220 (3)	200 (3)	240 (3)	-	-	-
Water absorption	ISO 62		%	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	-	-
Density	ISO 1183		g/cm ³	1.12	1.17	1.23	1.13	1.31	1.39	1.33	1.44	1.56	1.32	1.42	1.50	1.50	1.43	1.55	1.55	1.54	1.61	1.56	1.33	1.46	1.45

NOTES

- 1. UL recognition File No. of Daicel Polymer is E47773.
- 2. Values with asterisk (*) are UL-recognized values.
- 3. CF-reinforced grades come under Item 5 (18) of Annex 1 of the Export Trade Control Order on the basis of the Foreign Exchange and Foreign Trade Law of Japan.