NOVADURAN

Polybutylene Terephtalate Resin

Properties	Test Method	Terms	Units	Unreinforced UL-HB type				
				5010TRXA	**5010TRX5**	**5010R8L**	**5010R8M**	**5010R8S**
				Toughness	Toughness	Toughness	Toughness	Toughness
				-	-	-	-	-
				-	-	-	-	-
Physical properties								
Density	ISO 1183	-	g/cm^3	1.27	1.26	1.31	1.30	1.29
Water absorption	-	23degC, Underwater	%	0.10	0.10	0.10	0.09	0.08
Rheological properties								
Melt Mass-flow Rate	ISO 1133		g/10min	21	16	29	34	38
Melt Volume-flow Rate			cm^3/10min	19	14	27	31	35
		Temperature	degC	250	250	250	250	250
		Load	kg	2.16	2.16	2.16	2.16	2.16
Moulding shrinkage (1mmt)	-	MD	%	1.5	1.5	1.5	1.6	1.6
		TD		1.4	1.4	1.4	1.5	1.5
Moulding shrinkage (3mmt)	-	MD	%	2.2	2.3	2.2	2.3	2.3
		TD		2.0	2.1	2.0	2.1	2.1
Mechanical properties								
Tensile modulus	ISO 527-1 , 527-2	-	MPa	2400	2300	2000	1600	1400
Yield stress				51	47	47	44	42
Yield strain			%	4.4	3.1	5	11	13
Nominal strain at break				170	140	200	220	250
Stress at 50% strain			MPa	-	-	-	-	-
Stress at break				-	-	-	-	-
Strain at break			%	-	-	-	-	-
Flexural strength	ISO 178	-	MPa	80	67	62	57	52
Flexural modulus				2400	2400	2000	1500	1300
Charpy impact strength	ISO 179-1 , 179-2	23 degC	kJ/m^2	NB	NB	NB	NB	NB
Charpy notched impact strength		23 degC	kJ/m^2	7	9	4	5	6
Thermal properties								
Melting temperature	ISO 11357-3		degC	224	224	224	222	220
Temperature of deflection	ISO 75-1	1.80MPa	degC	54	52	54	52	50
under load	, 75-2	0.45MPa		136	130	138	135	130
Coefficient of Linear thermal expansion	ISO 11359-2	MD	1/degC	1.E-04	1.E-04	1.E-04	1.E-04	1.E-04
		TD		1.E-04	1.E-04	1.E-04	1.E-04	1.E-04
Flammability	UL94	0.4mmt	-	-	-	-	-	-
Flammability	UL94	0.8mmt	-	HB	HB	HB	HB	HB
Flammability	UL94	1.6mmt	-	-	-	HB	HB	HB
Flammability	UL94	3.2mmt	-	-	-	HB	HB	HB
GWFI(Glow-wire flammability test method for materials)	IEC 60695-2-12	3.0mmt	-	-	-	-	-	-
GWIT(Glow-wire ignitability test method for materials)	IEC 60695-2-13	3.0mmt	-	-	-	-	-	-
Electrical properties								
Relative permittivity	IEC 60250	1MHz	-	3.2	3.2	3.2	3.2	3.2
Dissipation factor	IEC 60250	1MHz	-	0.020	0.020	0.020	0.020	0.020
Volume resistivity	IEC 60093	-	ohm-m	1.E+14	1.E+14	1.E+14	1.E+14	1.E+14
Surface resistivity	IEC 60093	-	ohm	1.E+15	1.E+15	1.E+15	1.E+15	1.E+15
Electric strength	IEC 60243-1	1mmt	MV/m	22	22	22	22	22
		2mmt		17	17	17	17	17
		3mmt		-	-	-	-	-
Comparative tracking index	UL746A	-	-	-	-	PLC 0	PLC 0	PLC 0