kuraray

PHYSICAL PROPERTIES OF PARAPET

Property	Test Method		Condition	Unit	High Impact Grade							
					GR04940	GR04970	GR00100	GR01240	GR01270	GR-H24	GR-H42	GR-H60
	ISO No.	JIS No.			General	General	General	Heat Resistant	Heat Resistant	High Flowability	High Flowability	High Flowability
Optical												
Light transmission	ISO 13468-1	JIS K7361-1	3mm	%	92≦	91≦	91≦	92≦	91≦	92≦	91≦	91≦
Haze	ISO 14782	JIS 7136	3mm	%	≦1.0	≦1.5	≦1.8	≦1.0	≦1.5	≦1.0	≦1.4	≦1.4
Refractive Index Nd	ISO 489	JIS K7142	nd	—	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
Mechanical												
Tensile modulus	ISO 527-2	JIS K7162	1A/1	MPa	2500	2100	1700	2500	2100	2400	2100	1600
Tensile strength at break	ISO 527-2	JIS K7162	1A/5	MPa	59	48	40	62	50	55	45	38
Tensile strain at break	ISO 527-2	JIS K7162	1A/5	%	17	50	60	15	40	22	50	61
Flexural modulus	ISO 178	JIS K7171	—	MPa	2600	2200	1800	2600	2200	2500	2200	1700
Flexural stress at break	ISO 178	JIS K7171	—	MPa	95	78	62	96	79	88	76	61
Charpy impact strength/unnotched	ISO 179	JIS K7111	1eU	KJ/m^2	56	71	91	50	73	56	71	101
/notched	ISO 179	JIS K7111	1eA	KJ/m^2	3	4.5	6.5	3	4.5	2	4	5
Rockwell hardness	ISO 2039-2	JIS K7202	Mscale	—	84	68	44	85	68	81	63	39
Thermal												
Deflection temperature under load/annealed	ISO 75-2	JIS K7191	1.80MPa	℃	91	86	83	95	90	86	84	77
Vicat softening point	ISO 306	JIS K7206	B50	℃	97	93	90	102	97	94	92	88
MFR	ISO 1133	JIS K7210	230℃ 37.3N	g/10min	5	3	1.5	1.8	1.7	10	6	3
Specific heat	—	JIS K7123	—	J (g·℃)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Coefficient of linear expansion	—	JIS K7197	—	1/℃	$9\times10_{-5}$	$10\times10_{-5}$	$11\times10_{-5}$	$9\times10_{-5}$	$10\times10_{-5}$	$9\times10_{-5}$	$10\times10_{-5}$	$11\times10_{-5}$
Thermal conductivity	—	JIS KA1412	—	W/ (m·℃)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Electrical												
Surface resistivity	—	JIS K6911	—	Ω	$>10_{16}$	$>10_{16}$	$>10_{16}$	$>10_{16}$	$>10_{16}$	$>10_{16}$	$>10_{16}$	$>10_{16}$
Volume resistivity	—	JIS K6911	—	Ωm	$>10_{13}$	$>10_{13}$	$>10_{13}$	$>10_{13}$	$>10_{13}$	$>10_{13}$	$>10_{13}$	$>10_{13}$
Dielectric breakdown strength	—	JIS K6911	4kV/sec	MV/m	20	20	20	20	20	20	20	20
Dielectric onstant	—	JIS K6911	60Hz	—	4	4	4	4	4	4	4	4
Other												
Density	ISO 1183	JIS K7112	—	g/m^3	1.18	1.17	1.16	1.18	1.17	1.18	1.17	1.16
Water absorption at 23℃	ISO 62,method 1	—	24hr	%	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Molding shrinkage	ISO 294-4	JIS K7152-4	—	%	0.4～0.8	0.4～0.8	0.4～0.8	0.4～0.8	0.4～0.8	0.4～0.8	0.4～0.8	0.4～0.8
Flammability	UL94	—	—	class	HB	HB	HB	HB	HB	HB	HB	HB
Burning velcity	—	JIS K6911	—	cm/min	3	3	3	3	3	3	3	3