

SA Physical Properties

grade				SA-F (Standard)			SA-N (Improved low-temperature characteristics)			SA-C (Low hardness)	
Product name				SA-FP	SA-FW001	SA-FR201	SA-NP	SA-NW001	SA-NW201	SA-CP	SA-CW001
Shape				Powder	Pellet	Pellet	Powder	Pellet	Pellet	Powder	Pellet
Optical properties	Total light transmittance	ISO13468-1	%	90	90	90	90	90	90	90	90
	Haze	ISO13468-1	%	1	1	1	2	2	2	2	2
Mechanical properties	Hardness	ISO7619-1		A70	A70	A80	A70	A70	A90	A60	A60
	Tensile strength (500 mm/min.)	ISO37	MPa	10	10	14	12	12	14	9	9
	Elongation at break (500 mm/min.)	ISO37	%	200	200	200	200	200	170	240	240
	Tensile stress M_{100}	ISO37	MPa	5	5	8	7	7	11	4	4
	Compression permanent strain (70°C, 22 hrs.)	ISO815	%	45	45	70	50	50	75	45	45
	Permanent elongation	ISO/DIS2285	%	12	12	16	12	12	20	-	-
Abrasion resistance	ISO9352	mg	50	50	95	45	45	220	-	-	
Thermal properties	MFR (230°C, 98.07N)	ISO1133	g/10min	18	18	22	10	10	27	4	4
Other properties	Specific gravity	ISO1183	kg/cm ³	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	Coefficient of linear expansion		m/m·°C	2×10 ⁻⁴	2×10 ⁻⁴	2×10 ⁻⁴	2×10 ⁻⁴	2×10 ⁻⁴	2×10 ⁻⁴	2×10 ⁻⁴	2×10 ⁻⁴
	Surface intrinsic resistance		Ω	10 ¹⁵ <	10 ¹⁵ <	10 ¹⁵ <	10 ¹⁵ <	10 ¹⁵ <	10 ¹⁵ <	10 ¹⁵ <	10 ¹⁵ <

* All values in the above table are typical values and not guaranteed values. * All measurements were taken at 23°C.

GR-F, GR-FH Physical Properties

Molding Material

Item	Test method		Test condition	Unit	Film grade GR-F	Film grade GR-FH	Control (1)* HR-S	Control (2)** GR 00100
	ISO No.	JIS No.						
Total light transmittance	ISO 13468-1	JIS K7361-1	3mmt	%	91≧	91≧	92≧	91≧
Haze	ISO 14782	JIS K7136	3mmt	%	≦1.0	≦0.5	≦0.3	≦1.8
Refractive index	ISO 489	JIS K7142	nd	-	1.49	1.49	1.49	1.49
Tension modulus	ISO 527-2	JIS K7161	1A/1	Mpa	1,200	1,400	3,300	1,700
Charpy impact strength (with notches)	ISO 179	JIS K7111	1eA	KJ/m ³	4.5	2.5	1.4	6.5
Deflection temperature under load (with annealing)	ISO 75-2	JIS K7191	1.80MPa	°C	65	76	101	83
Vicat softening temperature	ISO 306	JIS K 7206	B50	°C	72	86	110	90
MFR	ISO 1133	JIS K 7210	230°C 37.3N	g/10min	1.3	1.4	2.4	1.5

* HR-S: PARAPET™ Optical grade (Heat resistant type)

** GR00100: PARAPET™ Impact resistant grade (General type)