



Property Table (Siloxane-PC copolymer)



	Features			Standard	Standard	Weather resistance	Transparency Standard	Flame-retardantV-0 UL746C: f 1	Weather resistance UL746C: f 1 Tracking resistance (Black)	GF reinforced High impact
	Grades			AG1950	AG2030	VG1950	RC2031	ZG1950	PG1940	GG1920
Properties	Units	Test Method	condition	>PC<	>PC<	>PC<	>PC<	>PC<	>PC<	>PC-GF20<
Density	g/cm ³	ISO 1183 (JIS K7112)		1.18	1.18	1.18	1.18	1.18	1.22	1.32
Water Absorption	%	ISO 62 (JIS K7209)	24h 50%RH	0.2	0.2	0.2	0.2	0.2	0.2	0.09
Fluidity										
Melt Volume-Flow Rate (MVR)	cm ³ /10min	ISO 1133 (JIS K7210)		300°C 1.20kg	300°C 1.20kg	300°C 1.20kg	300°C 1.20kg	300°C 1.20kg	300°C 1.20kg	300°C 1.20kg
				13	9	13	10	11	8	6
Spiral Flow Length	cm	Idemitsu Method		Thickness:2mm/Width:10mm Cylinder:300°C/Mold:80°C Inj.Pressure:100MPa	Thickness:2mm/Width:10mm Cylinder:300°C/Mold:80°C Inj.Pressure:100MPa	Thickness:2mm/Width:10mm Cylinder:300°C/Mold:80°C Inj.Pressure:100MPa	Thickness:2mm/Width:10mm Cylinder:300°C/Mold:80°C Inj.Pressure:100MPa	Thickness:2mm/Width:10mm Cylinder:300°C/Mold:80°C Inj.Pressure:100MPa	Thickness:2mm/Width:10mm Cylinder:300°C/Mold:80°C Inj.Pressure:100MPa	Thickness:2mm/Width:10mm Cylinder:300°C/Mold:80°C Inj.Pressure:125MPa
				25	21	25	22	25	25	26
Mechanical properties										
Tensile Stress at Yield*1	MPa	ISO 527-1,2 (JIS K7161, 7162)		Y60	Y58	Y60	Y59	Y60	Y55	105
Nominal tensile strain at break*2	%			tB100	tB110	tB100	tB115	tB100	tB85	3
Flexural Strength	MPa	ISO 178 (JIS K7171)		90	89	90	90	90	85	150
Flexural Modulus	GPa			2.1	2.2	2.1	2.2	2.1	2.2	5.3
Charpy Impact Strength	kJ/m ²	ISO 179-1 (JIS K7111)	notched at 23°C	72	85	72	80	70	65	22
			notched at 0°C	—	—	—	—	—	55	18
			notched at -30°C	60	65	60	25	30	35	18
			notched at -40°C	—	30	—	22	25	—	—
Izod Impact Strength	J/m	ASTM D256	notched at 23°C	800	850	800	820	750	750	190
			notched at 0°C	750	800	750	800	700	—	—
			notched at -30°C	650	750	650	700	600	600	170
			notched at -40°C	—	700	—	550	500	—	—
Rockwell Hardness	—	ISO 2039-2 (JIS K7202-2)	R scale/ M scale	—	—	—	—	—	R110	R120/M70
Thermal properties										
Temperature of deflection under load	°C	ISO 75-1,2 (JIS K7191-1,2)	0.45MPa 1.8MPa	138 123	— 124	138 123	— 123	138 123	138 123	148 144
Linear Thermal Expansion coefficient	×10 ⁻⁵ /°C	ISO 11359-2		7	7.0	7	7.0	8	6.5	—
Mould Shrinkage	%	Idemitsu Method	2mm MD	0.6~0.8	0.6~0.8	0.6~0.8	0.6~0.8	0.6~0.8	0.6~0.8	0.38
	%		2mm TD	0.6~0.8	0.6~0.8	0.6~0.8	0.6~0.8	0.6~0.8	0.6~0.8	0.51
Optical properties										
Total Luminous Transmittance	%	ISO 13468-1 (JIS K7361-1)	3mm	73	—	73	87	—	—	—
Flammability										
Flammability Rating	mm thickness	UL94	class/mini-thickness	V-2/0.50	V-2/0.40	V-2/0.40	V-2/0.40	V-0/1.5(ALL) 5VB/2.0(ALL) 5VA/3.0(ALL) V-1/0.8 (BK) HB/0.8(All colors except BK)	V-1/0.8(BK) V-0/1.0(BK) 5VB/2.0(BK) 5VA/2.3(BK)	—
Comparative tracking index(CTI)	PLC level	UL746A		—	—	—	—	3	2	—
UV light,Water exposure and immersion	—	UL746C		—	—	—	—	f1 (BK)	f1 (BK)	—
Electrical properties										
Dielectric Strength	kV/mm	IEC 60243-1 (JIS C2110)		—	—	—	—	—	—	—
Arc Resistance	PLC level	ASTM D495		—	—	—	—	—	—	—
Volume Resistivity	Ω·cm	ASTM D257		—	—	—	—	—	—	—
Dielectric Constant	—	IEC 60250	1MHz	—	—	—	—	2.9	—	—
Dielectric dissipation Factor	—		1MHz	—	—	—	—	0.0084	—	—
Standard Molding Parameters										
Cylinder Temperature				270~310°C (Maximum320°C)	270~310°C (Maximum320°C)	270~310°C (Maximum320°C)	270~310°C (Maximum320°C)	270~310°C (Maximum320°C)	270~310°C (Maximum320°C)	270~310°C (Maximum320°C)
Mold Temperature				80~110°C	80~110°C	80~120°C	80~110°C	80~120°C	80~120°C	80~120°C
Pre-drying condition				120°C, 5~8hours	120°C, 5~8hours	120°C, 5~8hours	120°C, 5~8hours	120°C, 5~8hours	120°C, 5~8hours	120°C, 5~8hours

*1 Y:Yield strength
*2 tB : Nominal tensile strain at break

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