

TOYO STYRENE GPPS

Characteristics			Injection molding			Injection molding (High-strength)		
			Ultra high flow	High flow	Heat resistance	Standard	Heat resistance	Medium flow
Grade Name			G100C	G200C	G320C	MW1C,D	MW2C	MT5D
Melt mass-flow rate (200°C, 5kg)	ISO 1133	g/10min	28	9.0	4.0	1.9	2.7	2.9
Vicat softening temperature (load 50N)	ISO 306	°C	88	89	102	92	95	97
Heat deflection temperature (load 1.8MPa)	ISO 75-2	°C	70	70	81	74	76	78
Charpy impact strength (notched)	ISO 179	kJ/m ²	1.1	1.4	1.9	2.5	2.2	2.0
Tensile stress at yield	ISO 527-1	MPa	39	41	45	45	46	46
Tensile strain at break	ISO 527-1	%	2	2	3	3	3	3
Flexural strength	ISO 178	MPa	74	80	98	93	93	95
Flexural modulus	ISO 178	MPa	3150	3200	3200	3200	3200	3200
Ball pressure test	ICE 60695-10-2	°C	75	75	95	80	85	90
Flammability (UL94 Classification)	UL 94	-	HB	HB	HB	HB	HB	HB

Characteristics			Extrusion (foaming)		
			Medium molecular weight	High molecular weight	High melt tension
Grade Name			HRM12	HRM26	HRM48N
Melt mass-flow rate (200°C, 5kg)	ISO 1133	g/10min	5.4	1.6	2.2
Vicat softening temperature (load 50N)	ISO 306	°C	102	103	102
Heat deflection temperature (load 1.8MPa)	ISO 75-2	°C	81	82	81
Charpy impact strength (notched)	ISO 179	kJ/m ²	1.4	2.0	2.1
Tensile stress at yield	ISO 527-1	MPa	45	50	50
Tensile strain at break	ISO 527-1	%	3	3	3
Flexural strength	ISO 178	MPa	95	104	99
Flexural modulus	ISO 178	MPa	3200	3200	3250
Ball pressure test	ICE 60695-10-2	°C	-	-	-
Flammability (UL94 Classification)	UL 94	-	-	HB	-

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TOYO STYRENE HIPS

Characteristics			Injection molding					Extrusion
			Strength & Rigidity	High gloss	Heat resisting	Medium flow	High Strength	Standard
Grade Name			H350	H485	H650	H700	H830	E640N
Melt mass-flow rate (200°C, 5kg)	ISO 1133	g/10min	8.0	4.0	3.4	11	1.9	2.7
Vicat softening temperature (load 50N)	ISO 306	°C	88	96	96	90	94	94
Heat deflection temperature (load 1.8MPa)	ISO 75-2	°C	70	75	75	71	73	73
Charpy impact strength (notched)	ISO 179	kJ/m ²	8	12	11	10	15	11
Tensile stress at yield	ISO 527-1	MPa	30	37	32	25	28	30
Tensile strain at break	ISO 527-1	%	45	40	45	50	57	50
Flexural strength	ISO 178	MPa	50	60	58	44	48	53
Flexural modulus	ISO 178	MPa	2500	2350	2300	2150	1950	2200
Surface gloss	JIS K 7105	%	—	92	—	—	—	64
Ball pressure test	ICE 60695-10-2	°C	80	90	90	80	—	—
Flammability (UL94 Classification)	UL 94	—	HB	HB	HB	HB	—	—

Characteristics			Injection molding & Extrusion
			Super High gloss & High Strength
Grade Name			XL4
Melt mass-flow rate (200°C, 5kg)	ISO 1133	g/10min	2.6
Vicat softening temperature (load 50N)	ISO 306	°C	94
Heat deflection temperature (load 1.8MPa)	ISO 75-2	°C	73
Charpy impact strength (notched)	ISO 179	kJ/m ²	16
Tensile stress at yield	ISO 527-1	MPa	36
Tensile strain at break	ISO 527-1	%	20
Flexural strength	ISO 178	MPa	56
Flexural modulus	ISO 178	MPa	2200
Surface gloss	JIS K 7105	%	99
Ball pressure test	ICE 60695-10-2	°C	—
Flammability (UL94 Classification)	UL 94	—	HB

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