

SolutionPartner


GPPS 25SP(I)

Injection Molding

Description

High Transparency, Heat Resistance

Application

 Food Container, Merchandise, Artificial Woods
PSP, Sheet, Film, etc.

Properties	Test Condition	Test Method	Unit	Typical Value
Physical				
Specific Gravity		ASTM D792	-	1.05
Molding Shrinkage (Flow), 3.2mm		ASTM D955	%	0.4~0.8
Melt Flow Rate	200 °C/5kg	ASTM D1238(G)	g/10min	3.2
	220 °C/10kg	-	g/10min	38
	230 °C/3.8kg	ASTM D1238(I)	g/10min	9
Mechanical				
Tensile Strength, 3.2mm @ Yield	50mm/min	ASTM D638	kg/cm ²	510
Tensile Elongation, 3.2mm @ Yield	50mm/min	ASTM D638	%	
@ Break	50mm/min		%	6
Tensile Modulus, 3.2mm	1mm/min	ASTM D638	kg/cm ²	29,400
Flexural Strength, 3.2mm	15mm/min	ASTM D790	kg/cm ²	960
Flexural Modulus, 3.2mm	15mm/min	ASTM D790	kg/cm ²	33,000
IZOD Impact Strength, 6.4mm (Notched)	23 °C	ASTM D256	kg·cm/cm	1
	-30 °C		kg·cm/cm	-
IZOD Impact Strength, 3.2mm (Notched)	23 °C	ASTM D256	kg·cm/cm	-
	-30 °C		kg·cm/cm	-
Rockwell Hardness	R-Scale	ASTM D785	-	121
Thermal				
Heat Deflection Temperature, 6.4mm (Unannealed)	18.6kg	ASTM D648	°C	88
	4.6kg		°C	-
Vicat Softening Temperature	5kg, 50 °C/h	ASTM D1525	°C	92
Flammability	1.6mm	UL94	class	HB
	3.2mm		class	HB
Relative Temperature Index		UL 746B		
Electrical			°C	-
Mechanical with Impact			°C	-
Mechanical without Impact			°C	-

Note) Typical values are only for material selection purpose, and variation within normal tolerances are for various colors.

Values given should not be interpreted as specification and not be used for part or tool design.

All properties, except melt flow rate are measured on injection moulded specimens and after 48 hours storage at 23 °C, 50% relative humidity.

Updated : 10-Mar-16

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Processing Guide (Injection Molding)

Processing Parameters		Unit	Value
Drying Temperature		°C	80
Drying Time		hrs	2 ~ 4
Minimum Moisture Content		%	0.01
Melt Temperature		°C	190 ~ 220
Cylinder Temperature	Rear	°C	170 ~ 190
	Middle	°C	180 ~ 200
	Front	°C	190 ~ 210
Nozzle Temperature		°C	190 ~ 220
Mold Temperature		°C	40 ~ 70
Back Pressure		kg/cm ²	300 ~ 600
Screw Speed		rpm	30 ~ 60

Note) Back Pressure & Screw Speed are only mentioned as general guidelines.

These may not apply or need adjustment in specific situations such as low shot sizes, thin wall molding and gas-assist molding.

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