

ABS HI100

Injection Molding Grade

Description

Very high impact strength at room & cold temperature

Application

Helmet, pipe & fittings, miscellaneous goods

Properties	Test Condition	Test Method	Unit	Typical Value
Physical				
Specific Gravity		ASTM D792	-	1.02
Molding Shrinkage (Flow), 3.2mm		ASTM D955	%	0.4~0.7
Melt Flow Rate	220 °C/10kg	ASTM D1238	g/10min	11
Mechanical				
Tensile Strength, 3.2mm @ Yield	50mm/min	ASTM D638	kg/cm ²	380
Tensile Elongation, 3.2mm @ Yield	50mm/min	ASTM D638	%	>5
@ Break	50mm/min		%	>10
Tensile Modulus, 3.2mm	1mm/min	ASTM D638	kg/cm ²	
Flexural Strength, 3.2mm	15mm/min	ASTM D790	kg/cm ²	580
Flexural Modulus, 3.2mm	15mm/min	ASTM D790	kg/cm ²	19,000
IZOD Impact Strength, 6.4mm (Notched)	23 °C	ASTM D256	kg·cm/cm	45
	-30 °C		kg·cm/cm	25
IZOD Impact Strength, 3.2mm (Notched)	23 °C	ASTM D256	kg·cm/cm	48
	-30 °C		kg·cm/cm	25
Rockwell Hardness	R-Scale	ASTM D785	-	92
Thermal				
Heat Deflection Temperature, 6.4mm (Unannealed)	18.6kg	ASTM D648	°C	84
	4.6kg		°C	
Vicat Softening Temperature	5kg, 50 °C/h	ASTM D1525	°C	90
Flammability		UL94		
	1.5mm		class	HB
3.0mm		class	HB	
Relative Temperature Index		UL 746B		
	Electrical		°C	60
	Mechanical with Impact		°C	60
Mechanical without Impact		°C	60	
Electrical				
Comparative Tracking Index(CTI)	Solution A	IEC 60112	Volts	0
Surface Resistivity		IEC 60093	Ohm	
Volume Resistivity	23 °C	ASTM D257	Ohm·m	
Arc Resistance	23 °C	ASTM D495	Ohm·cm	6

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 molded specimens and after 48 hours storage at 23 °C, 50% relative humidity.

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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	210 ~ 240
Cylinder Temperature	Rear	°C 180 ~ 200
	Middle	°C 190 ~ 210
	Front	°C 200 ~ 220
Nozzle Temperature	°C	200 ~ 230
Mold Temperature	°C	40 ~ 70
Back Pressure	kg/cm ²	5 ~ 15
Screw Speed	%	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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