

HI100

Injection Molding

Description

- Very high impact strength at room & cold temperature

Applications

- Helmet, pipe & fittings, miscellaneous goods

Properties	Method	Unit	HI100
Physical			
Specific Gravity , 23°C	ASTM D792		1.02
Mold Shrinkage , 23°C, 3.2mm , 23°C	ASTM D955	%	0.4 ~ 0.7
Melt Flow Rate , 220°C, 10kg	ASTM D1238	g/10min	11
Mechanical			
Tensile Strength at Yield , 23°C, 50mm/min, 3.2mm	ASTM D638	MPa	37
Tensile Elongation at Yield , 23°C, 50mm/min, 3.2mm	ASTM D638	%, (Min)	5
Tensile Elongation at Break , 23°C, 50mm/min, 3.2mm	ASTM D638	%, (Min)	10
Tensile Modulus , 23°C, 50mm/min, 3.2mm	ASTM D638	MPa	1560
Flexural Strength , 23°C, 15mm/min, 3.2mm	ASTM D790	MPa	57
Flexural Modulus , 23°C, 15mm/min, 3.2mm	ASTM D790	MPa	1850
Izod Impact Strength , Notched, 3.2mm, 23°C	ASTM D256	J/m	480
Izod Impact Strength , Notched, 3.2mm, -30°C	ASTM D256	J/m	245
Izod Impact Strength , Notched, 6.4mm, 23°C	ASTM D256	J/m	440
Izod Impact Strength , Notched, 6.4mm, -30°C	ASTM D256	J/m	245
Rockwell Hardness , R-Scale	ASTM D785		92
Thermal			
HDT , Edgewise, 1.82MPa, 6.4mm, Unannealed	ASTM D648	°C	84
VICAT , 50N, 50°C/h	ASTM D1525	°C	90
RTI Electrical	UL 746B	°C	60
RTI Mechanical with Impact	UL 746B	°C	60
RTI Mechanical without Impact	UL 746B	°C	60
Flammability, 1.5mm	UL 94		HB
Flammability, 3.0mm	UL 94		HB

Note

Typical values can be used only for the purpose of selecting material, and there can be variation within normal tolerances for various colors.

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

All properties, except melt flow rate are measured by injection molded specimens 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
Moisture Content	%	~ 0.01
Melt Temperature	°C	210 ~ 240
Nozzle Temperature	°C	200 ~ 230
Mold Temperature	°C	40 ~ 70
Back Pressure, Hydraulic Type	kg/cm ²	300 ~ 600
Screw Speed	rpm	30 ~ 60

Note

Back Pressure & Measuring 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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