

SolutionPartner


ER451

Injection Molding

Description

- Hear Resistance

Applications

- Automotives Interior & Exterior Housing (Garnish etc.)

Properties	Method	Unit	ER451
Physical			
Specific Gravity , 23°C	ASTM D792		1.05
Mold Shrinkage , 23°C, 3.2mm , 23°C	ASTM D955	%	0.4 ~ 0.7
Melt Flow Rate , 220°C, 10kg	ASTM D1238	g/10min	14
Mechanical			
Tensile Strength at Yield , 23°C, 50mm/min, 3.2mm	ASTM D638	Mpa	50
Tensile Elongation at Break , 23°C, 50mm/min, 3.2mm	ASTM D638	%, (Min)	15
Tensile Modulus , 23°C, 50mm/min, 3.2mm	ASTM D638	MPa	2400
Flexural Strength , 23°C, 15mm/min, 3.2mm	ASTM D790	Mpa	80
Flexural Modulus , 23°C, 15mm/min, 3.2mm	ASTM D790	MPa	2550
Izod Impact Strength , Notched, 3.2mm, 23°C	ASTM D256	J/m	270
Izod Impact Strength , Notched, 3.2mm, -30°C	ASTM D256	J/m	100
Izod Impact Strength , Notched, 6.4mm, 23°C	ASTM D256	J/m	250
Izod Impact Strength , Notched, 6.4mm, -30°C	ASTM D256	J/m	90
Rockwell Hardness , R-Scale	ASTM D785		110
Thermal			
HDT , Edgewise, 1.82MPa, 6.4mm, Unannealed	ASTM D648	°C	92
VICAT , 50N, 50°C/h	ASTM D1525	°C	99
RTI Electrical	UL 746B	°C	60
RTI Mechanical with Impact	UL 746B	°C	60
RTI Mechanical without Impact	UL 746B	°C	60

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.

Updated Date : 3-Nov-17 Issued Date : 7-Mar-18

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Processing Guide (Injection Molding)

Processing Parameters	Unit	Value
Drying Temperature	°C	80 ~ 90
Drying Time	hrs	3 ~ 4
Maximum Moisture Content	%	~ 0.07
Melt Temperature	°C	230 ~ 260
Cylinder Temperature , Rear	°C	180 ~ 210
Cylinder Temperature, Middle	°C	210 ~ 230
Cylinder Temperature , Front	°C	230 ~ 240
Nozzle Temperature	°C	230 ~ 240
Mold Temperature	°C	40 ~ 60
Back Pressure, Hydraulic Type	kg/cm ²	10 ~ 30

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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