

# ABS TR557

## Injection Molding

### Description

High Transparency, High Impact

### Application

Electric/Electronic Applications, Copier, Printer etc.

Properties	Test Condition	Test Method	Unit	Typical Value
<b>Physical</b>				
Specific Gravity		ASTM D792	-	1.09
Molding Shrinkage (Flow), 3.2mm		ASTM D955	%	0.4~0.7
Melt Flow Rate	220°C/10kg	ASTM D1238	g/10min	23
<b>Mechanical</b>				
Tensile Strength, 3.2mm		ASTM D638		
@ Yield	50mm/min		kg/cm <sup>2</sup>	450
Tensile Elongation, 3.2mm		ASTM D638		
@ Yield	50mm/min		%	5
@ Break	50mm/min		%	40
Tensile Modulus, 3.2mm	1mm/min	ASTM D638	kg/cm <sup>2</sup>	21,500
Flexural Strength, 3.2mm	15mm/min	ASTM D790	kg/cm <sup>2</sup>	680
Flexural Modulus, 3.2mm	15mm/min	ASTM D790	kg/cm <sup>2</sup>	21,500
IZOD Impact Strength, 6.4mm (Notched)		ASTM D256		
	23°C		kg·cm/cm	16
	-30°C		kg·cm/cm	7
IZOD Impact Strength, 3.2mm (Notched)		ASTM D256		
	23°C		kg·cm/cm	16
	-30°C		kg·cm/cm	6
Rockwell Hardness	R-Scale	ASTM D785	-	106
Pencil Hardness		ASTM D3363	-	HB
<b>Thermal</b>				
Heat Deflection Temperature, 6.4mm (Unannealed)		ASTM D648		
	18.6kg		°C	81
	4.6kg		°C	89
Vicat Softening Temperature		ASTM D1525		
	5kg, 50°C/h		°C	85
Flammability		UL94		
1.6mm			class	HB
3.2mm			class	HB
<b>Optical</b>				
Transparency		ASTM D1003	%	90
Haze		ASTM D1003	%	2.2

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.

Updated : 9-Nov-09

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### Processing Guide (Injection Molding)

Processing Parameters	Unit	Value	
Drying Temperature	°C	80 ~ 90	
Drying Time	hrs	2 ~ 4	
Minimum Moisture Content	%	0.01	
Melt Temperature	°C	200 ~ 230	
Cylinder Temperature	Rear	°C	180 ~ 200
	Middle	°C	190 ~ 210
	Front	°C	200 ~ 220
Nozzle Temperature	°C	200 ~ 230	
Mold Temperature	°C	40 ~ 60	
Back Pressure	kg/cm <sup>2</sup>	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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