

# ABS MA201

Injection Molding, Extrusion Molding

## Description

General Purpose, Low Gloss

## Application

Automotive Sheet, Semi-Conductor Tray.

Properties	Test Condition	Test Method	Unit	Typical Value
<b>Physical</b>				
Specific Gravity		ASTM D792	-	1.04
Molding Shrinkage (Flow), 3.2mm		ASTM D955	%	0.4-0.7
Melt Flow Rate	200 °C/5kg	ASTM D1238(G)	g/10min	
	220 °C/10kg	-	g/10min	7.3
	230 °C/3.8kg	ASTM D1238(I)	g/10min	0.2
<b>Mechanical</b>				
Tensile Strength, 3.2mm @ Yield		ASTM D638		
	50mm/min		kg/cm <sup>2</sup>	500
Tensile Elongation, 3.2mm @ Yield @ Break		ASTM D638		
	50mm/min		%	
	50mm/min		%	37
Tensile Modulus, 3.2mm	1mm/min	ASTM D638	kg/cm <sup>2</sup>	-
Flexural Strength, 3.2mm	15mm/min	ASTM D790	kg/cm <sup>2</sup>	750
Flexural Modulus, 3.2mm	15mm/min	ASTM D790	kg/cm <sup>2</sup>	24,500
IZOD Impact Strength, 6.4mm (Notched)		ASTM D256		
	23 °C -30 °C		kg-cm/cm kg-cm/cm	25.5
IZOD Impact Strength, 3.2mm (Notched)		ASTM D256		
	23 °C -30 °C		kg-cm/cm kg-cm/cm	
Rockwell Hardness	R-Scale	ASTM D785	-	108
<b>Thermal</b>				
Heat Deflection Temperature, 6.4mm (Unannealed)		ASTM D648		
	18.6kg 4.6kg		°C °C	89
Vicat Softening Temperature	5kg, 50 °C/h	ASTM D1525	°C	100
Flammability 1.5mm 3.0mm		UL94		
			class class	HB HB
Relative Temperature Index Electrical Mechanical with Impact Mechanical without Impact		UL 746B		
			°C	-
			°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	℃	70~80	
Drying Time	hrs	3 ~ 4	
Minimum Moisture Content	%	0.01	
Melt Temperature	℃	200 ~ 230	
Cylinder Temperature	Rear	℃	180 ~ 200
	Middle	℃	190 ~ 210
	Front	℃	200 ~ 230
Nozzle Temperature	℃	200 ~ 230	
Mold Temperature	℃	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.

### Processing Guide (Extrusion Molding)

Processing Parameters	Unit	Value	
Drying Temperature	℃	70~80	
Drying Time	hrs	3 ~ 4	
Minimum Moisture Content	%	0.01	
Melt Temperature	℃	200 ~ 230	
배럴 온도	Zone1	℃	180 ~ 200
	Zone2	℃	190 ~ 210
	Zone3	℃	200 ~ 230
	Zone4	℃	200 ~ 230
어댑터 온도	℃	200 ~ 230	
다이 온도	℃	200 ~ 230	
롤 스택 온도	Top	℃	70 ~ 100
	Middle	℃	70 ~ 90
	Bottom	℃	60 ~ 90

Note) Recommend initial lower temperatures settings to avoid material degradation / hang-up in die & purge material from extruder prior to shutdown.

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