

# ABS ER400

Injection Molding Grade

## Description

High Heat, High Impact

## Application

Automotives Interior & Exterior Housing

Properties	Test Condition	Test Method	Unit	Typical Value
<b>Physical</b>				
Density		ISO 1183	g/cm <sup>3</sup>	1.04
Molding Shrinkage (Flow), 3.2mm		ISO 294-4	%	0.4 ~0.8
Melt Flow Rate	220°C/10kg	ISO 1133	g/10min	8.0
<b>Mechanical</b>				
Tensile Strength @ Yield	50mm/min	ISO 527	MPa	52
Tensile Modulus	1mm/min	ISO 527	MPa	2,440
Flexural Strength	2mm/min	ISO 178	MPa	79
Flexural Modulus	2mm/min	ISO 178	MPa	2,400
IZOD Impact Strength, 80*10*4mm (Notched)	23°C	ISO 180/1A	kJ/m <sup>2</sup>	21.0
	-30°C			8.0
Charpy Impact Strength, 80*10*4mm (Notched)	23°C	ISO179/1eA	kJ/m <sup>2</sup>	21.0
	-30°C			9.0
Rockwell Hardness		ISO 2039	-	112
<b>Thermal</b>				
Heat Deflection Temp. 120*10*4mm (unannealed)	1.8MPa	ISO 75/Be	°C	85
	0.45MPa	ISO 75/Ae	°C	
Vicat Softening Temperature		ISO 306		
	50N, 50°C/h		°C	101
CLTE, 23°C to 60°C		ISO 11359-2		
	Flow		10 <sup>-5</sup> m/m °C	
Cross-flow			10 <sup>-5</sup> m/m °C	
Flammability		UL94		HB
Relative Temperature Index		UL 746B		
Electrical			°C	
Mechanical with Impact			°C	
Mechanical without Impact			°C	
<b>Electrical</b>				
Comparative Tracking Index(CTI)	Solution A	IEC 60112	Volts	
Surface Resistivity		IEC 60093	Ohm	
Volume Resistivity	23°C	IEC 60093	Ohm·m	
Electric Strength, 1mm	23°C	IEC 60243-1	kV/mm	

(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 : 6-Oct-15

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### Processing Guide (Injection Molding)

Processing Parameters	Unit	Value	
Drying Temperature	℃	80 ~ 90	
Drying Time	hrs	3 ~ 4	
Recommendable Moisture Content	%	0.07 below	
Melt Temperature	℃	230 ~ 260	
Cylinder Temperature	Rear	℃	180 ~ 210
	Middle	℃	210 ~ 230
	Front	℃	230 ~ 240
Nozzle Temperature	℃	230 ~ 240	
Mold Temperature	℃	40 ~ 60	
Back Pressure	kg/cm <sup>2</sup>	10 ~ 30	
Measuring Speed	rpm	Low speed	

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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