

ABS PI641

Extrusion Molding Grade

Description

General Purpose, High Impact

Application

Pipe Fitting

Properties	Test Condition	Test Method	Unit	Typical Value
Physical				
Specific Gravity		ASTM D792	-	1.04
Molding Shrinkage (Flow), 3.2mm		ASTM D955	%	0.4~0.7
Melt Flow Rate	220°C/10kg	ASTM D1238	g/10min	7.5
Mechanical				
Tensile Strength, 3.2mm @ Yield	50mm/min	ASTM D638	kg/cm ²	450
Tensile Elongation, 3.2mm @ Yield	50mm/min	ASTM D638	%	>5
@ Break	50mm/min		%	20
Tensile Modulus, 3.2mm	1mm/min	ASTM D638	kg/cm ²	
Flexural Strength, 3.2mm	15mm/min	ASTM D790	kg/cm ²	690
Flexural Modulus, 3.2mm	15mm/min	ASTM D790	kg/cm ²	22,500
Tear Strength @ Break	50mm/min	ASTM D624	kg/cm	
IZOD Impact Strength, 6.4mm (Notched)	23 °C -30 °C	ASTM D256	kg·cm/cm kg·cm/cm	42
IZOD Impact Strength, 3.2mm (Notched)	23 °C -30 °C	ASTM D256	kg·cm/cm kg·cm/cm	45
Rockwell Hardness	R-Scale	ASTM D785	-	100
Thermal				
Heat Deflection Temperature, 6.4mm (Unannealed)	18.6kg 4.6kg	ASTM D648	°C °C	86 91
Heat Deflection Temperature, 6.4mm (annealed)	18.6kg 4.6kg	ASTM D648	°C °C	87 93
Vicat Softening Temperature	5kg, 50 °C/h 1kg, 120 °C/h	ASTM D1525	°C °C	94
Flammability		UL94	class	

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 : 14-Jun-17

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Processing Guide (Extrusion Molding)

Processing Parameters		Unit	Value
Drying Temperature		℃	70 ~ 80
Drying Time		hrs	3 ~ 4
Recommended Moisture Content		%	Max. 0.1
Melt Temperature		℃	200 ~ 250
Barrel Temperature	Zone 1	℃	180 ~ 210
	Zone 2	℃	190 ~ 230
	Zone 3	℃	200 ~ 250
	Zone 4	℃	200 ~ 250
Adapter Temperature		℃	200 ~ 250
Die Temperature		℃	200 ~ 250
Roll Stack Temperature	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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