

# XR401

## Description

XR401 has well-balanced properties with high impact strength and high heat, targeted for injection molding

## Key Features

Standard Purpose, High Heat Resistance, Paintability, High Impact Strength

## Application

Air Conditioner, Air Purifier, Battery, Bumper, Cockpit, Coffee Machine, Consent, Dehumidifier, Delivery Robot, Door Trim, Drone, Electric Bike, Exterior ETC, Fan, Fan Heater, Fire Alarm, Food Serving Robot, Interior ETC, Microwave Oven, Motorcycle, Multi Tap, Outside Mirror, PCB (Printed Circuit Board), Power Tool, Security Alarm, Set-Top Box, Switch, Terminal Box, Tractor, UPS (Uninterruptible Power Supply System), Water Purifier, Wireless Router

Properties	Condition	Method	Unit	XR401
<b>Physical</b>				
Specific Gravity	23°C	ASTM D792		1.05
Mold Shrinkage	23°C, 3.2mm	ASTM D955	%	0.4 ~ 0.7
Melt Flow Index	220°C, 10kg	ASTM D1238	g/10min	9
<b>Mechanical</b>				
Tensile Strength at Yield	23°C, 50mm/min, 3.2mm	ASTM D638	MPa	49
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, 10mm/min, 6.4mm	ASTM D790	MPa	79
Flexural Modulus	23°C, 10mm/min, 6.4mm	ASTM D790	MPa	2550
Izod Impact Strength	Notched, 3.2mm, 23°C	ASTM D256	J/m	265
Izod Impact Strength	Notched, 3.2mm, -30°C	ASTM D256	J/m	90
Izod Impact Strength	Notched, 6.4mm, 23°C	ASTM D256	J/m	245
Izod Impact Strength	Notched, 6.4mm, -30°C	ASTM D256	J/m	80
Rockwell Hardness	R-Scale	ASTM D785		110
<b>Thermal</b>				
Heat Deflection Temperature	Edgewise, 1.82MPa, 6.4mm, Unannealed	ASTM D648	°C	97
Heat Deflection Temperature	Edgewise, 0.46MPa, 6.4mm, Unannealed	ASTM D648	°C	106
Heat Deflection Temperature	Edgewise, 1.82MPa, 6.4mm, Annealed	ASTM D648	°C	104
Heat Deflection Temperature	Edgewise, 0.46MPa, 6.4mm, Annealed	ASTM D648	°C	109
Vicat Softening Temperature	50N, 50°C/h	ASTM D1525	°C	106
Flammability	1.5mm	UL 94		HB
Flammability	3.0mm	UL 94		HB

## 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 index are measured by injection molded specimens after 48 hours storage at 23°C, 50% relative humidity.

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## Processing Guide (Injection Molding)

Processing Parameters	Unit	Value
Drying Temperature	°C	80 ~ 90
Drying Time	hrs	3 ~ 4
Injection Temperature	°C	220 ~ 290
Mold Temperature	°C	40 ~ 80
Screw Speed	rpm	30 ~ 60

## Note

Injection Temperature & 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.