

# INVISTA

## U3600 PA66 Resin

### Product Description

INVISTA U3600 is a low viscosity PA66 resin suitable for compounding, injection molding, and extrusion applications where high flow, ease of processing, and physical property retention are desired.

	Properties (dry)	Value	Units	Method
Viscosity	RV in formic acid, nominal	36.5	–	ASTM D789
	VN at 0.5% in sulfuric acid, nominal	129	mL/g	ISO 307
	RV at 1% in sulfuric acid, nominal	2.4	–	–
Physical	Density	1.14	g/cm <sup>3</sup>	ISO 1183
	Mold shrinkage, 2.0 mm, parallel	1.2	%	ISO 294-4
	Mold shrinkage, 2.0 mm, transverse	1.3	%	ISO 294-4
	Water absorption - 24 hours	1.5	%	ISO 62
	Water absorption - equilibrium @ 50% RH	2.6	%	ISO 62
Mechanical	Tensile strength at yield	82	MPa	ISO 527
	Elongation at yield	4.4	%	ISO 527
	Elongation at break	30	%	ISO 527
	Tensile modulus	2950	MPa	ISO 527
	Flexural modulus	3000	MPa	ISO 178
	Flexural strength	98	MPa	ISO 178
	Notched Charpy at 23°C	5.0	kJ/m <sup>2</sup>	ISO 179
	Notched Charpy at -30°C	5.3	kJ/m <sup>2</sup>	ISO 179
	Unnotched Charpy at 23°C	NB	kJ/m <sup>2</sup>	ISO 179
	Unnotched Charpy at -30°C	NB	kJ/m <sup>2</sup>	ISO 179
Thermal	Notched Izod at 23°C	4.2	kJ/m <sup>2</sup>	ISO 180
	Melting temperature, 10°C/min	263	°C	ISO 11357
	HDT at 0.45 MPa	197	°C	ISO 75
	HDT at 1.80 MPa	69	°C	ISO 75

## General Information

### Material Status

Commercial: Active

### Availability

- North America
- South America
- Europe
- Asia

### Features

- Exceptionally high flow
- Excellent mechanical properties in glass-fiber-reinforced resins

### RoHS

No intentional additives or ingredients used in U3600 are among those in European directive 2011/65/EC (RoHS), as amended.

## Process Guidelines for Molding

Drying temperature	80°C
Drying time*	3 - 6 hrs
Barrel temperatures	
Rear	250 – 280°C
Middle	275 – 290°C
Front	275 – 290°C
Nozzle	275 – 295°C
Processing temperature (melt)	280 – 295°C
Mold temperature	50 – 90°C
Back pressure**	2 - 10 bar
Vent depth	0.007 - 0.04 mm
Cushion (range)	4 – 6 mm
Suggested moisture (max)	0.20 wt%
Suggested moisture (min)	0.10 wt%
Screw Speed	75 - 180 rpm

\* Initial moisture below 0.3 wt%. Use dehumidified air.

\*\* Melt pressure

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