

INVISTA

U4800 PA66 Resin

Product Description

INVISTA U4800 is a general purpose, natural PA66 resin suitable for compounding, injection molding, and extrusion applications where ease of processing, excellent color, and physical property retention are desired.

	Properties (dry)	Value	Units	Method
Viscosity	RV in formic acid, nominal	48	–	ASTM D789
	VN at 0.5% in sulfuric acid, nominal	150	mL/g	ISO 307
	RV at 1% in sulfuric acid, nominal	2.7	–	–
	Density	1.14	g/cm ³	ISO 1183
Physical	Mold shrinkage, 2.0 mm, parallel	1.5	%	ISO 294-4
	Mold shrinkage, 2.0 mm, transverse	1.8	%	ISO 294-4
	Water absorption - 24 hours	1.8	%	ISO 62
	Water absorption - equilibrium @ 50% RH	2.6	%	ISO 62
Mechanical	Tensile strength at yield	82	MPa	ISO 527
	Elongation at yield	4.2	%	ISO 527
	Elongation at break	40	%	ISO 527
	Tensile modulus	3100	MPa	ISO 527
	Flexural modulus	2900	MPa	ISO 178
	Flexural strength	94	MPa	ISO 178
	Notched Charpy at 23°C	5.4	kJ/m ²	ISO 179
	Notched Charpy at -30°C	4.2	kJ/m ²	ISO 179
	Unnotched Charpy at 23°C	NB	kJ/m ²	ISO 179
	Unnotched Charpy at -30°C	NB	kJ/m ²	ISO 179
	Notched Izod at 23°C	4.7	kJ/m ²	ISO 180
Thermal	Melting temperature, 10°C/min	261	°C	ISO 11357
	HDT at 0.45 MPa	200	°C	ISO 75
	HDT at 1.80 MPa	72	°C	ISO 75
	CLTE, 2.0 mm, Parallel, 23 - 55°C	0.9	10 ⁻⁴ /°C	ISO 11359
	CLTE, 2.0 mm, Transverse, 23 - 55°C	1.1	10 ⁻⁴ /°C	ISO 11359

	Properties (dry)	Value	Units	Method
Electrical	Surface Resistivity	2E+14	ohms	IEC 60093
	Volume Resistivity, 2.0 mm	4E+14	ohm-cm	IEC 60093
	Dielectric Strength, 1.0 mm	32	kV/mm	IEC 60243
Flammability	Flammability Classification at 0.71 mm	V-2	-	UL 94
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	Glow-Wire Flammability at 0.71 mm	960	°C	IEC 60695
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General Information

Material Status

Commercial: Active

Availability

- North America
- South America
- Europe
- Asia

Features

- Low moisture
- Excellent whiteness

RoHS

No intentional additives or ingredients used in U4800 are among those in European directive 2011/65/EC (RoHS), as amended.

Process Guidelines for Molding

Drying temperature	80°C
Drying time*	3 - 4 hrs
Barrel temperatures	
Rear	250 - 280°C
Middle	275 - 290°C
Front	275 - 290°C
Nozzle	275 - 290°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 0.25 wt%. Use dehumidified air.

** Melt pressure

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