

INVISTA

HV80A PA66 Resin

Product Description

INVISTA HV80A is a medium viscosity PA66 resin for extrusion, injection molding, and compounding applications. It is non-lubricated and has excellent whiteness.

	Properties (dry)	Value	Units	Method
Viscosity	RV in formic acid, nominal	80	–	ASTM D789
	VN at 0.5% in formic acid, nominal	180	mL/g	ISO 307
	VN at 0.5% in sulfuric acid, nominal	190	mL/g	ISO 307
	RV at 1% in sulfuric acid, nominal	3.2	–	–
Physical	Density	1.14	g/cm ³	ISO 1183
	Mold shrinkage, 2.0 mm, parallel	1.4	%	ISO 294-4
	Mold shrinkage, 2.0 mm, transverse	1.5	%	ISO 294-4
	Water absorption - 24 hours	1.8	%	ISO 62
	Water absorption - equilibrium @ 50% RH	2.7	%	ISO 62
Mechanical	Tensile strength at yield	84	MPa	ISO 527
	Elongation at yield	4.4	%	ISO 527
	Elongation at break	45	%	ISO 527
	Tensile modulus	2900	MPa	ISO 527
	Flexural modulus	2950	MPa	ISO 178
	Flexural strength	101	MPa	ISO 178
	Notched Charpy at 23°C	6.6	kJ/m ²	ISO 179
	Notched Charpy at -30°C	5.7	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	5.0	kJ/m ²	ISO 180
Thermal	Melting temperature, 10°C/min	261	°C	ISO 11357
	HDT at 0.45 MPa	187	°C	ISO 75
	HDT at 1.80 MPa	64	°C	ISO 75

	Properties (dry)	Value	Units	Method
Electrical	Volume Resistivity, 2.00 mm	1010	Ohm-cm	UL 746A
	Dielectric Strength, 1.0 mm	10.2	kV/mm	UL 746A
	Comparative Tracking Index, 3.0 mm	≥600	volts	UL 746A
Flammability	Flame Rating at 0.40 mm	V-2	–	UL 94
	Flame Rating at 0.71 mm	V-2	–	UL 94
	Flame Rating at 1.5 mm	V-2	–	UL 94
	Flame Rating at 3.0 mm	V-2	–	UL 94

General Information

Material Status

Commercial: Active

Availability

- North America
- South America
- Europe
- Asia

Features

- High viscosity
- Excellent whiteness and processability
- Fast and consistent crystallization

RoHS

No intentional additives or ingredients used in HV80A are among those in European directive 2011/65/EC (RoHS), as amended.

Process Guidelines for Molding

Drying temperature	90°C
Drying time*	3 - 4 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)	0.10 wt%
Suggested moisture (min)	0.04 wt%
Screw Speed	50 - 150 rpm

* Initial moisture below 0.15 wt%. Use dehumidified air.

** Melt pressure

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