

VINPOL™ PA66UFNAT46H

General Purpose, Unfilled, Natural Polyamide 66

Unfilled

Natural Color

VINPOL PA66UFNAT46H is a general-purpose, unfilled, heat-stabilized, lubricated polyamide 66 resin in natural color. The heat stabilizer system has been designed to provide excellent property retention in high temperature applications. This product is lubricated internally and externally.

Resin Property	Typical Value	Units	Test Method
Relative Viscosity in formic acid, nominal	46	-	ASTM D789
Viscosity Number, 0.5% sulfuric acid, nominal	147	mL/g	ISO 307
Viscosity Number, 0.5% formic acid, nominal	134	mL/g	ISO 307
Relative Viscosity in 1% sulfuric acid, nominal	2.65	-	-
Density	1.14	g/cm ³	ISO 1183
Mold Shrinkage, 2.0 mm, Parallel	1.8	%	ISO 294-4
Mold Shrinkage, 2.0 mm, Transverse	1.7	%	ISO 294-4
Water Absorption – 24 hrs	1.7	%	ISO 62
Water Absorption – Equilibrium @ 50% RH	2.6	%	ISO 62
Tensile Strength at Yield	84	MPa	ISO 527
Elongation at Yield	4.4	%	ISO 527
Elongation at Break	30	%	ISO 527
Tensile Modulus	3100	MPa	ISO 527
Flexural Modulus	2900	MPa	ISO 178
Flexural Strength	94	MPa	ISO 178
Notched Charpy @ 23°C	5.0	kJ/m ²	ISO 179
Notched Charpy @ -30°C	4.2	kJ/m ²	ISO 179
Unnotched Charpy @ 23°C	NB	kJ/m ²	ISO 179
Unnotched Charpy @ -30°C	NB	kJ/m ²	ISO 179
Notched Izod @ 23°C	5.0	kJ/m ²	ISO 180
Melting Temperature, 10°C/min	261	°C	ISO 11357
HDT at 0.45 MPa	185	°C	ISO 75
HDT at 1.80 MPa	62	°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	0.9	10 ⁻⁴ /°C	ISO 11359
Dielectric Strength, 1.0 mm	18	kV/mm	UL 746A
Comparative Tracking Index, 3.0 mm	600	volts	UL 746A
High Voltage Arc Tracking Rate (HVTR)	PLC 0	-	UL 746A
High Volt, Low Current Arc Resistance	PLC 5	-	UL 746A
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
Glow Wire Flammability at 0.71 mm	960	°C	IEC 60695
Glow Wire Flammability at 1.5 mm	960	°C	IEC 60695
Glow Wire Flammability at 3.0 mm	960	°C	IEC 60695

Drying conditions: 80°C for 3-4 hrs (initial moisture below 0.25 wt%. Use dehumidified air)

Processing Conditions: Melt temperature: 280-295°C. Mold temperature: 50-90°C. Melt pressure: 2-10 bar.

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