

Nilit Nilamid A H2 FR HF2 Unfilled, Flame Retardant PA66/6 Co-Polymer

Category : Polymer , Thermoplastic , Nylon , Nylon 6/66 , Nylon 66/6, Unreinforced

Material Notes:

Description: Nilamid A H2 FR HF2 is an unfilled, flame retardant NYLON 66/6 co-polymer that does not contain halogen or red phosphorous. This product combines excellent flow characteristics and extremely fast cycle times with outstanding elongation and impact strength and a good thermal performance. Because of its excellent processing characteristics it is often used in complicated components. Typical applications include Terminal blocks, electrical cooling fans and housings, fuse boxes and carriers and flame retardant cable ties. This product can be supplied in a full range of colors and has an excellent surface finish. Laser marking grades are available. Key characteristics: Easy processingFast cyclingGood heat aging characteristics: UL RTI listing (mechanical) up to 140°C V0 listing at 0.4 mmHalogen and red phosphorous freeExcellent CTI value (600 V)Good impact strengthGood elongation Information provided by NILIT.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Nilit-Nilamid-A-H2-FR-HF2-Unfilled-Flame-Retardant-PA666-Co-Polymer.php

Physical Properties	Metric	English	Comments
Density	1.17 g/cc	0.0423 lb/in ³	ASTM D792, ISO 1183
Water Absorption	1.5 %	1.5 %	23°C, 24h in H ₂ O; sim. ISO 62
Water Absorption at Saturation	7.5 %	7.5 %	sim. ISO 62
Linear Mold Shrinkage, Flow	0.013 cm/cm	0.013 in/in	Euronil
Linear Mold Shrinkage, Transverse	0.013 cm/cm	0.013 in/in	Euronil

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	80.0 MPa	11600 psi	ISO 527, ASTM D638
Elongation at Break	5.0 %	5.0 %	
Tensile Modulus	3.60 GPa	522 ksi	ISO 527, ASTM D638
Flexural Yield Strength	110 MPa	16000 psi	ISO 178, ASTM D790
	30.0 MPa	4350 psi	ISO 178, ASTM D790
	@Temperature 90.0 °C	@Temperature 194 °F	
Flexural Modulus	3.00 GPa	435 ksi	ISO 178, ASTM D790
	0.850 GPa	123 ksi	ISO 178, ASTM D790
	@Temperature 90.0 °C	@Temperature 194 °F	
Izod Impact, Notched (ISO)	2.50 kJ/m ²	1.19 ft-lb/in ²	ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Mechanical Properties	Metric	English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	4.50 J/cm ²	21.4 ft-lb/in ²	ISO 179
	3.60 J/cm ²	17.1 ft-lb/in ²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.450 J/cm ²	2.14 ft-lb/in ²	ISO 179
	0.350 J/cm ²	1.67 ft-lb/in ²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	120 °C	248 °F	20,000 hr; IEC 216
Deflection Temperature at 0.46 MPa (66 psi)	207 °C	405 °F	ISO 75, ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	80.0 °C	176 °F	ISO 75, ASTM D648
Vicat Softening Point	220 °C	428 °F	49 N; ISO 306, ASTM D1525
	235 °C	455 °F	9.8 N; ISO 306, ASTM D1525
Flammability, UL94	V-0	V-0	
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	V-0	V-0	
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	V-0	V-0	
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	V-0	V-0	
	@Thickness 3.20 mm	@Thickness 0.126 in	
Oxygen Index	28 %	28 %	ASTM D2863
Glow Wire Test	960 °C	1760 °F	Glow Wire Flammability Index; IEC 694-2-12
	@Thickness 3.20 mm	@Thickness 0.126 in	
	960 °C	1760 °F	Glow Wire Flammability Index; IEC 694-2-12
	@Thickness 0.800 mm	@Thickness 0.0315 in	

Electrical Properties	Metric	English	Comments
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Electrical Properties	18.0 kV/mm Metric	457 kV/in English	Comments
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Comparative Tracking Index	>= 600 V @Thickness 3.20 mm	>= 600 V @Thickness 0.126 in	Sol. A; IEC 112, UL 746A
	>= 600 V @Thickness 3.20 mm	>= 600 V @Thickness 0.126 in	Sol. B; IEC 112, UL 746A

Processing Properties	Metric	English	Comments
Nozzle Temperature	270 - 280 °C	518 - 536 °F	
Zone 1	260 - 270 °C	500 - 518 °F	hopper
Zone 2	260 - 275 °C	500 - 527 °F	
Zone 3	270 - 280 °C	518 - 536 °F	
Zone 4	270 - 280 °C	518 - 536 °F	
Melt Temperature	265 - 280 °C	509 - 536 °F	Do not melt above 280°C
Mold Temperature	>= 80.0 °C	>= 176 °F	
Drying Temperature	80.0 - 85.0 °C	176 - 185 °F	
Dry Time	4 hour	4 hour	
Injection Pressure	70.0 - 100 MPa	10200 - 14500 psi	

Descriptive Properties	Value	Comments
Clamping Force	in tons, 0.7 times the projected surface area in cm ²	
Flammability Rating	SE	FMVSS No. 302, 355x100x1 mm
Heat Resistance - Ball Test	OK	at 125°C, IEC 309
	OK	at 165°C, IEC 309
Holding Pressure	90 MPa	
Needle Test	OK	IEC 695-2-2, 1 or 2 mm

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