Model HP 3D HR PA12 FR(b)(R60) enabled by Evonik

Blue Card

ALSO CERTIFIED TO IEC REQUIREMENTS

File Number: E491715

Printing Process Designation Number 2

Plastics for Additive Manufacturing E491715

Guide Information View Certificate of Compliance

HP Printing and Computing Solutions S L U

CAMI DE CAN GRAELLS 1-21, ST CUGAT DEL VALLES, 08174 Spain

HP 3D HR PA12 FR(b)(R60) enabled by Evonik

Polyamide 12 (PA12), furnished as powder

Color	Min. Thk (mm)	Flame Class	HWI (PLC)	HAI (PLC)	RTI Elec (°C)	RTI Imp (°C)	RTI Str (°C)
NC	3.5	V-0	0	0	65	65	65
	2.5	V-0	1	0	65	65	65
	1.8	V-2	2	0	65	65	65
	1.0-1.1	HB	4	0	65	65	65

Comparative Tracking Index (CTI) (PLC):	-	IEC Comparative Tracking Index (V):	-	IEC CTI Material Group:	-
Inclined Plane Tracking (IPT) (kV):	-	High-Voltage Arc Tracking Rate (HVTR) (PLC):	-	Dielectric Strength (DS) (kV/mm):	-
Volume Resistivity (VR) (10^x ohm cm):	-	Surface Resistivity (SR) (10^x ohms/square):	-	High Volt, Low Current Arc Resis (D495):	-

Processing Parameters

Process Category:	--				
For use with printer:	--				
Post Process Method:	--				
Build Plane:	--	Printer Preset:	--	Print Speed:	--
Layer Height:	--	Infill:	--	Are Supports Used:	--

IEC/ISO small-scale test data does not pertain to building materials, furnishings and related contents. IEC/ISO small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 2025-01-30
Last Revised: 2025-03-11

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FLAMMABILITY PROPERTIES	VALUE	TEST METHOD
Flammability		ANSI/UL 94
1.0 to 1.1 mm, Color: NC	HB	
1.8 mm, Color: NC	V-2	
2.5 mm, Color: NC	V-0	
3.5 mm, Color: NC	V-0	

ISO/IEC FLAMMABILITY PROPERTIES	VALUE	TEST METHOD
Flammability		IEC 60695-11-10
1.0 to 1.1 mm, Color: NC	HB75	
1.8 mm, Color: NC	V-2	
2.5 mm, Color: NC	V-0	
3.5 mm, Color: NC	V-0	

ELECTRICAL PROPERTIES	VALUE	TEST METHOD
Hot-wire Ignition (HWI)		UL 746A
1.0 to 1.1 mm	PLC 4	
1.8 mm	PLC 2	
2.5 mm	PLC 1	
3.5 mm	PLC 0	
High Amp Arc Ignition (HAI)		UL 746A
1.0 to 1.1 mm	PLC 0	
1.8 mm	PLC 0	
2.5 mm	PLC 0	
3.5 mm	PLC 0	
Comparative Tracking Index (CTI)	PLC 1	UL 746A

THERMAL PROPERTIES	VALUE	TEST METHOD
Relative Thermal Index - Electrical Strength		UL 746B
1.0 to 1.1 mm	65 °C	
1.8 mm	65 °C	

2.5 mm	65 °C	
3.5 mm	65 °C	
Relative Thermal Index - Mechanical Impact		UL 746B
1.0 to 1.1 mm	65 °C	
1.8 mm	65 °C	
2.5 mm	65 °C	
3.5 mm	65 °C	
Relative Thermal Index - Mechanical Strength		UL 746B
1.0 to 1.1 mm	65 °C	
1.8 mm	65 °C	
2.5 mm	65 °C	
3.5 mm	65 °C	

PROCESSING PARAMETER	VALUE	TEST METHOD
Process Category	Powder Bed Fusion - Multi-Jet Fusion (MJF)	
Build Plane	Horizontal & Vertical	
Layer Thickness	90.00 µm	
Scan Speed	0 m/sec	
Scan Strategy	Alternate	
Post Process Method	Bead Blasting, Glass beads, 70-150 µm or Ceramics beads, 150-250 µm with 3-5 bars Air Pressure. For 5-10 sec each 100cm2 with 15 cm distance to part.	
Printer	HP Jet Fusion 5600 3D Printer Series (E165854)	
Printer Preset	Balanced	