



Material for Powder Bed Fusion

ASPHIA-PP

Material Overview : Polypropylene material powder

Description / Benefits

Asphia-PP is a real polypropylene material powder.

It is a material with a excellent recyclability and low operating cost performance.

It has excellent flexibility and toughness, so it is characterized by good elongation and resistance to cracking.

Strong against repeated bending, excellent hinge properties and chemical resistance. (Acids, Alkalis, etc)

Wide range of use and can be used in many products, such as automotive parts, medicals, semiconductor parts, home appliances, daily necessities, food containers, etc.

Applications

<Characteristics> Excellent flexibility and toughness, maximum elongation at break

<Applications> Final parts for small lot, Functionality evaluation model,

Design model, Impact resistant model

<Example> Final parts for medical equipments and semiconductor Automotive interior parts for pillar and

ASPHIA-PP Material properties

Properties		ASPHIA-PP	Test method
General properties	Surface roughness	Top surface(Ra)17.1 μ m,(Rz)102.9 μ m	
	Density of parts	0.879g/cm ³	
	Water absorption rate	—	
	Powder color	Cream	
	Filler compounding ratio	—	
Thermal properties	Melting point	129°C	
	Recrystallization point	93°C	
	Process window	25°C	
	Load deflection temp.<0.45MPa>	73°C	JIS K7191-2
	Load deflection temp.<1.8MPa>	45°C	JIS K7191-2
	Linear expansion coefficient	129.15x10 ⁻⁶ /K	JIS K7197-1991
	Thermal conductivity	0.141W/(m·K)	JIS A1412-2
Printing temp	Guideline	110°C	
Mechanical properties	Maximum tensile strngth	21MPa	JIS K7161
	Tensile modulus	775MPa	JIS K7161
	Elongation at break	500%	JIS K7161
	Maximum bending stress	22MPa	JIS K7171
	Bending strain	20.6%	JIS K7171
	Bending modulus	466MPa	JIS K7171
	Impact strength (with notch)	—	JIS K7111-1
Electrical characteristics	Dielectric constant	—	

1.The shelf life of this material is expected to be at least 12 months under stored at appropriate environmental temperature and dry conditions.

2.The data contained in this document is subject to change without notice.

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