



3D Industrie

Additive Manufacturing
by Maria & Johannes Lutz



HIPS FILSHAPER

High impact polystyrene (HIPS) is a polystyrene variant enriched with butadiene rubber. This material is characterized by relatively low density, resistance to moisture and is characterized by high impact strength. He found his application as a material for the manufacture of equipment housings, furniture components, display mannequins, containers, etc.

The material we offer is a typical supporting material used in two-extruder printers. However, it also works well in print as a base material. HIPS is characterized by a printing temperature of 225 ° C, and due to its average shrinkage it is recommended to use a heated table to control the cooling process.

IDENTIFICATION OF THE SUBSTANCE/MIXTURE

Chemical name of the product	High Impact Polystyrene
Recommended use	Material for printing in FDM technology
Chemical type	Amorphous thermoplastic polymer
Nominal diameter	1.75 mm

PHYSICAL AND MECHANICAL ATTRIBUTES

Physical attributes		
Description	Value	Test method
Density	1,04 g/cm ³	ISO 1183
Moisture absorption	<0,1 %	ISO 62

Mechanical attributes		
Description	Value	Test method
Tensile strength	28 MPa	ISO 527-2
Tension extension	55%	ISO 527-2
Impact strength	8 kJ /m ²	ISO 179/1eA
Hardness Shore D	77	ISO 2039-2

Thermal attributes		
Description	Value	Test method
Temperature of deflection under pressure 1.8MPa	94°C	ISO 75-2A
VICAT softening temperature	195°C	ISO 306B50
Print temperature	>255°C	-

Inflammability		
Description	Value	Test method
Flammability class	No data	-

Electrical attributes		
Description	Value	Test method
Surface resistivity	$>10^{13} \Omega$	IEC 93
volume resistivity	No data	IEC 93

OTHER INFORMATION

Product should be handled in accordance with good industrial hygiene, safety practice and all regulations. The information is being provided solely as a guideline for the safe handling, use, consumption, processing, storage, transportation, disposal and release of the Materials. The information may not be sufficient for such purposes, as it is based on producer's knowledge at the time of creating the document, the user should not place any reliance on the information provided.