

PCABS.T01

EverfilTM | 3D
Filament

TECHNICAL SPECIFICATION

DESCRIPTION

PCABS.T01 EverfilTM Engineering filament, provides exceptional performance even at low temperatures and has a high heat distortion temperature. The blend of PC and ABS makes the filament strong and durable, characterized by excellent strength, impact resistance, and heat resistance. The material has a wide range of applications in the automotive and railway industries, and is suitable for printing models that operate over a wide range of temperatures.

TYPICAL APPLICATIONS

- **Automotive parts:** PC-ABS is widely used in the automotive industry for manufacturing various components such as interior trim panels, dashboard components, door handles, and exterior body parts. Its high impact resistance, heat resistance, and dimensional stability make it suitable for these demanding applications.
- **Electronics enclosures:** PC-ABS is commonly used for producing enclosures and housings for electronic devices such as computer peripherals, consumer electronics, and industrial equipment. Its excellent mechanical strength, flame retardancy, and electrical insulation properties make it a preferred choice for protecting sensitive electronic components.
- **Consumer goods:** PC-ABS is found in a variety of consumer goods such as appliances, consumer electronics, and sporting goods. Its toughness, impact resistance, and ability to be molded into complex shapes make it suitable for applications where durability and aesthetics are important.
- **Prototyping and rapid manufacturing:** PC-ABS is often used in 3D printing for prototyping and rapid manufacturing of functional parts and prototypes. Its ability to be printed with high accuracy and dimensional stability makes it a popular choice for producing prototypes and end-use parts in various industries.
- **Industrial equipment:** PC-ABS is used in the manufacturing of industrial equipment and machinery components such as equipment housings, protective covers, and machinery parts. Its combination of high strength, chemical resistance, and heat resistance makes it suitable for these rugged applications.

TECHNICAL PARAMETERS

RODUCT PARAMETERS

Diameter (mm)	1,75; 2,85
Diameter tolerance (mm)	+/-0,02
Ovality tolerance (mm)	+/-0,015

PHYSICAL PARAMETERS

PARAMETR	NOMINAL VALUE	UNIT	TEST
PHYSICAL:			
Density	1,12	g/cm ²	ISO -1183
Mould shrinkage 3,2 mm, flow	0,5-0,7	%	
Moisture absorption 23C/50%RH	0,15	%	ISO 62

MECHANICAL PROPERTIES

Tensile stress yield, 50 mm/min	63	MPA	ASTM D638
Tensile modulus, 5 mm/min	2200	MPA	ISO 527-2
Flexural stress yield, 2 mm/min	85	MPA	ISO 178
Flexural modules, 2 mm/min	2100	MPA	ISO 178
Ball indentation hardness H358/30	95	MPA	ISO 2039-1

IMPACT

Isolt impact, notched 23 °C	633	J/m	ASTM D256
Isolt impact, notched -30 °C	50	J/m	ASTM D256
Charpy impact, notched 23 °C	45	kJ/m²	ISO 179/2C

THERMAL PROPERTIES

Thermal conductivity	0,2	W/m°C	ISO 8302
Vicat softening temperature, rate B/50	140	°C	ISO 306
Relative temperature index, Elec	130	°C	UL 746B

ELECTRICAL:

Dielectric strength	17	kV/mm	IEC-60234-1
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FLAME CHARACTERISTICS

Flame glass rating (94HB)	1,5	mm	UL94
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RECOMMENDED PRINTING PARAMETRIS

Nozzle temperature	255-275	C°	
Bed temperature	85-100	C°	
Cooling	glass + thin layer of glue or BuiltTak		
Heated chamber	yes		

The above data is illustrative, as it depends on the type of 3D printing equipment owned, the geometry of the specific print, and environmental conditions.

PACKAGING

The filament is produced on spools weighing 1.0 kg, 2.5 kg, and 5.0 kg. The spool is vacuum-packed in a bag made of high barrier moisture barrier foil and secured with a cardboard box. An additional advantage is the possibility of multiple openings of the 1.0 kg spool bag.

Weight netto/brutto

1,0 kg spool	1,00 /1,42
2,5 kg spool	2,50/ 3,30
5,0 kg spool	5,00 / 5,90

Dimensions of the spool (mm)	Ø external/ height/ hole
1,0 kg spool	200/68/52
2,5 kg spool	300/100/52
5,0 kg spool	350/100/52

STORAGE

The filament must be stored in a sealed package in a cold and dry place.

MANUFACTURER

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