

## Carbonium Technical Data sheet

### DESCRIPTION

Carbonium is a polyamide filament **with carbon microdust content**.

Carbon, apart from being similar aesthetically to pieces in fibre, has **greater resistance to loads and mechanical fatigue being tougher and more elastic**.

Ideal for anyone needing to **produce pieces having mechanical resistance**, and which are **fast and simple to work post printing**.

An ideal material for the automotive sector and for producing accessories for applications where **lightness combined with resistance** is required.

### PRINTING MODES

- Extruder Temperature: 235°-250°
- Bed Printing Temperature: 70°
- Suggested printing speed: 60 mm/sec

### APPLICATIONS

Carbonium is a thermoplastic filament especially suitable 3D Printing Prototyping Technologies FFF (Fused Filament Fabrication).

Following are tests carried out to proof the features and properties of the material:

Property Test Condition	Standard	Unit	Values
<b>Mechanical Properties</b>			
Tensile modulus	ISO 178	MPa	8000
Flexural modulus	ISO 178	MPa	6800
Stress at break	ISO 527-2	MPa	110
<b>Thermal Properties</b>			
Melting point DSC (Differential Scanning Calorimetry)	ISO 3146	°C	178
<b>Other Properties</b>			
Water Absorption	ISO 62	%	1,1
Density	ISO 1183	g/cc	1,07
Electrical Volume resistivity	IEC 60093	Ohm-cm	1,00E+11

### SUPPLY FORM

Carbonium is supplied as Filaments.

External filament diameter is 1,76 mm (Diameter tolerances + 0.02/-0,03 mm; ovality tolerances: max 0,05 mm).

It has to be kept in its original packaging. Avoid direct exposure to sunlight.

**Olivetti S.p.A.**

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