

## B 10

### Technical Data Sheet

#### ABS Resin

Impressio® ABS B 10 is an easily processable ABS with good mechanical and thermal properties. The product has been optimized for the production of filaments dedicated to 3D printing (FDM) and its properties make it compatible with most of the commercial 3D printers. The continuous mass technology used to produce Impressio® ABS B 10 makes it one of the grades with the lowest organic volatile content on the market.

#### Applications

Impressio® ABS B 10 has been designed to produce:

- 1.75 mm and 2.85 mm filaments for 3D printing.

#### Typical processing data

Impressio® ABS B 10 has a very good processability with standard filament extruders and it allows a good thickness stability.

Standard processing conditions (\*) for the production of a 1.75 mm to 2.85 mm filament:

- melt temperature 210 - 240°C

(\*) The processing conditions may vary depending on the extrusion line and the cooling conditions.

#### Certification

Impressio® ABS B 10, as supplied in the original packaging, by composition is compliant to some existing regulations on plastic materials intended for food contact.

#### Storage

- ⚠ Store away from atmospheric agents and direct sunlight, away from sources of heat and light.
- 🕒 The product, if stored correctly, keeps its characteristics for at least fifteen months.

#### General information

Impressio® ABS B 10 is available in natural colour.

For further information, please contact Versalis directly writing to [info.styrenics@versalis.eni.com](mailto:info.styrenics@versalis.eni.com).

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Property	Test Conditions	Test method	Units	Values
<b>General</b>				
Water absorption	24h - 23°C	ISO 62	%	0,3
Density	-	ISO 1183	g/cm <sup>3</sup>	1,04
<b>Rheological</b>				
Melt flow rate	220°C - 10kg	ISO 1133	g/10'	25
<b>Mechanical</b>				
Strain at yield	50 mm / min	ISO 527	%	2,8
Tensile stress at yield	50 mm/min	ISO 527	MPa	47
Rockwell hardness	Scala R / R Scale	ISO 2039/2	-	109
Tensile modulus	1 mm/min	ISO 527	MPa	2350
Charpy impact strength, notched	+23°C	ISO 179/1eA	kJ/m <sup>2</sup>	14
Izod impact strength, notched	+23°C - 4mm	ISO 180/1A	kJ/m <sup>2</sup>	14
<b>Thermal</b>				
Coefficient of linear thermal expansion	-	ISO 11359-2	10 <sup>-5</sup> /°C	9
Thermal conductivity	-	ASTM C 177	W/(K.m)	0,17
Moulding shrinkage	-	ISO 294/4	%	0,4 ÷ 0,6
Vicat softening temperature	50 N - 50°C/h	ISO 306/B	°C	98
<b>Flammability</b>				
Glow wire test (GWT)	3 mm	IEC 60695-2-10	°C	650
<b>Electrical</b>				
Dielectric constant (relative permittivity)	1000 Hz secco/dry	IEC 60250	-	3,1
Dissipation factor	1000 Hz secco/dry	IEC 60250	-	15·10E-3
Surface resistivity	secco / dry	IEC 60093	ohm	10E14
Volume resistivity	secco / dry	IEC 60093	ohm.cm	10E15
Dielectric strength	secco / dry	IEC 60243	kV/mm	30

Please consult the relevant safety data sheet for more detailed information.

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