

ABS

Commodity Material



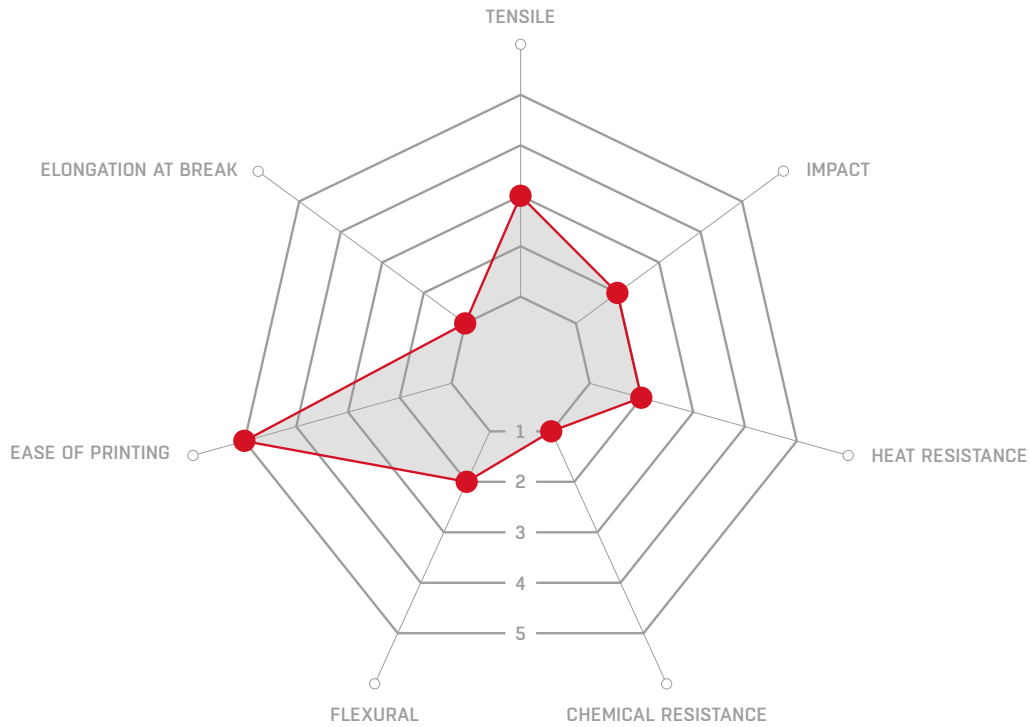
General Properties		Standard
Printed Part Density	1040 kg/m ³ / 64.9 lb/ft ³	ISO 1183-1

Thermal Properties		Standard
HDT at 1.8 MPa	91 °C / 196 °F	ISO 75-2
HDT at 0.45 MPa	96 °C / 205 °F	ISO 75-2
Glass Transition Temperature	104 °C / 219 °F	ISO 11357-2
Melt Volume Rate	24.2 cm ³ /10 min / 4.84 in ³ /10 min (260 °C, 5 kg)	ISO 1133

Mechanical Properties



Print direction	Standard	XY	XZ	ZX
		Flat	On its edge	Upright
Tensile strength	ISO 527	36.3 MPa / 5.3 ksi	-	21.3 MPa / 3.1 ksi
Elongation at Break	ISO 527	7.4 %	-	1.8 %
Young's Modulus	ISO 527	1958 MPa / 284 ksi	-	1608 MPa / 233 ksi
Flexural Strength	ISO 178	56.6 MPa / 8.2 ksi	58.3 MPa / 8.5 ksi	38.59 MPa / 5.6 ksi
Flexural Modulus	ISO 178	1833 MPa / 266 ksi	1767 MPa / 256 ksi	1586 MPa / 230 ksi
Flexural Strain at Break	ISO 178	5.3 %	5.0 %	3.1 %
Impact Strength Charpy (notched)	ISO 179-2	16.0 kJ/m ²	17.4 kJ/m ²	2.8 kJ/m ²
Impact Strength Charpy (unnotched)	ISO 179-2	36.4 kJ/m ²	42.2 kJ/m ²	6.8 kJ/m ²
Impact Strength Izod (notched)	ISO 180	18.8 kJ/m ²	18.9 kJ/m ²	3.5 kJ/m ²
Impact Strength Izod (unnotched)	ISO 180	40.0 kJ/m ²	35.7 kJ/m ²	7.2 kJ/m ²



General information

COMPONENTS

Acrylonitrile Butadiene Styrene based filament for Fused Filament Fabrication.

PRODUCT DESCRIPTION

ABS is the second most used 3D printing material. It is strong, flexible and has a high heat resistance. ABS is a preferred plastic for engineers and professional applications.

DELIVERY FORM AND WAREHOUSING

3DGence ABS filament should be stored at 15 - 25°C in its originally sealed package in a clean and dry environment. If the recommended storage conditions are observed the products will have a minimum shelf life of 12 months.

PRODUCT SAFETY

Recommended: Process materials in a well ventilated room, or use professional extraction systems. For further and more detailed information please consult the corresponding material safety data sheets.

Detailed data are available on our website
www.3dgence.com

AMERICAS

3DGence America Inc.
 Dallas, Texas,
 USA

+1.855.466.3813
inquiries@3dgence.com

EUROPE

3DGence GmbH,
 Gradignanstraße 4
 64319 Pfungstadt, Germany

+49 6157 9118972
cs@3dgence.com

3DGence sp. z o.o.
 Graniczna 66
 44-178 Przyszowice, Poland

+48 32 438 98 63
cs@3dgence.com