

Essentium Altitude TECHNICAL DATA SHEET

ESSENTIUM ALTITUDE

Essentium Altitude is a high-performance co-polymer blend of polycarbonate and siloxane, mixed with non-chlorinated and non-brominated flame-retardant agents and UV stabilizers. The base resin meets UL 94V-0 flame testing at 1.5 millimeters. This unique formulation allows this material to withstand temperatures of down to negative 60 C.

MECHANICAL PROPERTIES							
Metric	Test Method	0.4 mm nozzle			0.8 mm Nozzle		
		PRINT ORIENTATION			PRINT ORIENTATION		
		XY	45/45	ZX	XY	45/45	ZX
Ultimate Tensile Strength, MPa	ISO 37	58.14	45.88	34.24	45.50	45.7	33.10
Tensile Modulus, GPa	ISO 37	3.74	1.9	1.8	1.37	2.11	--
Strain at Break, %	ISO 37	2.25	3.5	2.4	18.10	4.72	3.45
Notched Izod Impact Strength, kJ/m ²	ISO 180/A	34.557	30.845	--	39.59	30.744	--
Flexural Strength, MPa	ISO 37	93.14	81.99	--	92.7	88.63	--
Flexural Modulus, GPa	ISO 37	1.96	1.66	--	1.9	1.82	--

MATERIAL PROPERTIES		
Property	Method	Value
Density, g/cm ³	ISO 1183	1.1546
HDT @ 0.45 MPa, °C	ISO 75	120.2
Tg (Onset)		144.3
Tg (Mid)		147.3

