

# MATERIAL PROPERTY

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# COMPOSITUM FILAMENT SERIES™

## COMPOSITUM ABS ST™

### ISO (ASTM) Property

Item	Measuring Method	Condition	Unit	Value
<b>Physical</b>				
Specific Gravity	ASTM D791	Natural color	g/cm3	<b>1.038</b>
Melt Flow Index	ISO 1133	200°C/5kg	g/10min	<b>3.8</b>
	ASTM D1238	200°C/5kg		<b>2.6</b>
		220°C/10kg		<b>25.0</b>
<b>Mechanical</b>				
Tensile Strength	ISO 527	50mm/min	MPa	<b>44.7</b>
	ASTM D638	5mm/min		<b>48</b>
Flexural Strength	ISO 178	2mm/min	MPa	<b>64</b>
Flexural Modulus	ISO 178	2mm/min	MPa	<b>1840.1</b>
Tensile Modulus	ISO 527		MPa	<b>1967,2</b>
Tensile Elongation at Yield	ISO 527		%	<b>2.1</b>
Tensile Elongation at Break	ISO 527		%	<b>18.6</b>
Charpy Impact Strength	ISO 179 1eA	4mm, 23°C	KJ/cm2	<b>20.0</b>
IZOD Impact Strength	ISO 180 1A	4mm, 23°C	KJ/cm2	<b>20.1</b>
Rockell Hardness	ISO 2039	R Scale		<b>106.2</b>
<b>Thermal</b>				
Heat Deflection Temperature	ISO 75-2	0.45MPa	°C	<b>97.6</b>
Heat Deflection Temperature	ISO 75-2	1.8MPa	°C	<b>92.9</b>
VICAT Softening Temperature	ISO R 306	B/50	°C	<b>94.4</b>

The output parameters of the control samples:

- filling: 100%
- layer: 0.2mm
- nozzle: 0.4mm
- print temperature: 240°C
- platform temperature: 100°C
- Temperature of the working chamber: 54°

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