

Arnitel® ID 2045

TPC

>50% Renewable Content, 3D printing

To: Nexeo

Print Date: 2016-03-16

The mechanical data is tested on printed tensile bars, printed in two directions: 0°-90° and 45°-45°

Properties	Typical Data	Unit	Test Method
Rheological properties			
Melt volume-flow rate	45	cm ³ /10min	ISO 1133
Temperature	230	°C	ISO 1133
Load	2.16	kg	ISO 1133
Thermal properties			
Melting temperature (10°C/min)	158	°C	ISO 11357-1/-3
Glass transition temperature (10°C/min)	-35	°C	ISO 11357-1/-2
Vicat softening temperature (50°C/h 10N)	90	°C	ISO 306
Burning Behav. at 1.5 mm nom. thickn.	HB	class	IEC 60695-11-10
Electrical properties			
Volume resistivity	>1E13	Ohm*m	IEC 60093
Electric strength	20	kV/mm	IEC 60243-1
Other properties			
Water absorption in water at 23°C after 24h	0.14	%	ISO 62
Humidity absorption	0.04	%	Sim. to ISO 62
Density	1100	kg/m ³	ISO 1183
Material specific properties			
Tensile modulus (3D printed tensile bars) 0°-90°	29	MPa	ISO 527-1/-2

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Property Data (Provisional)

DSM Provisional

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Properties	Typical Data	Unit	Test Method
Tensile modulus (3D printed tensile bars) 45°-45°	29	MPa	ISO 527-1/-2
Maximum tensile stress (3D printed tensile bars) 0°-90°	8	MPa	ISO 527-1/-2
Maximum tensile stress (3D printed tensile bars) 45°-45°	7.6	MPa	ISO 527-1/-2
Elongation at break (3D printed tensile bars) 0°-90°	350	%	ISO 527-1/-2
Elongation at break (3D printed tensile bars) 45°-45°	390	%	ISO 527-1/-2

Mechanical properties (TPE)

Shore D Hardness (3s)	34	-	ISO 868
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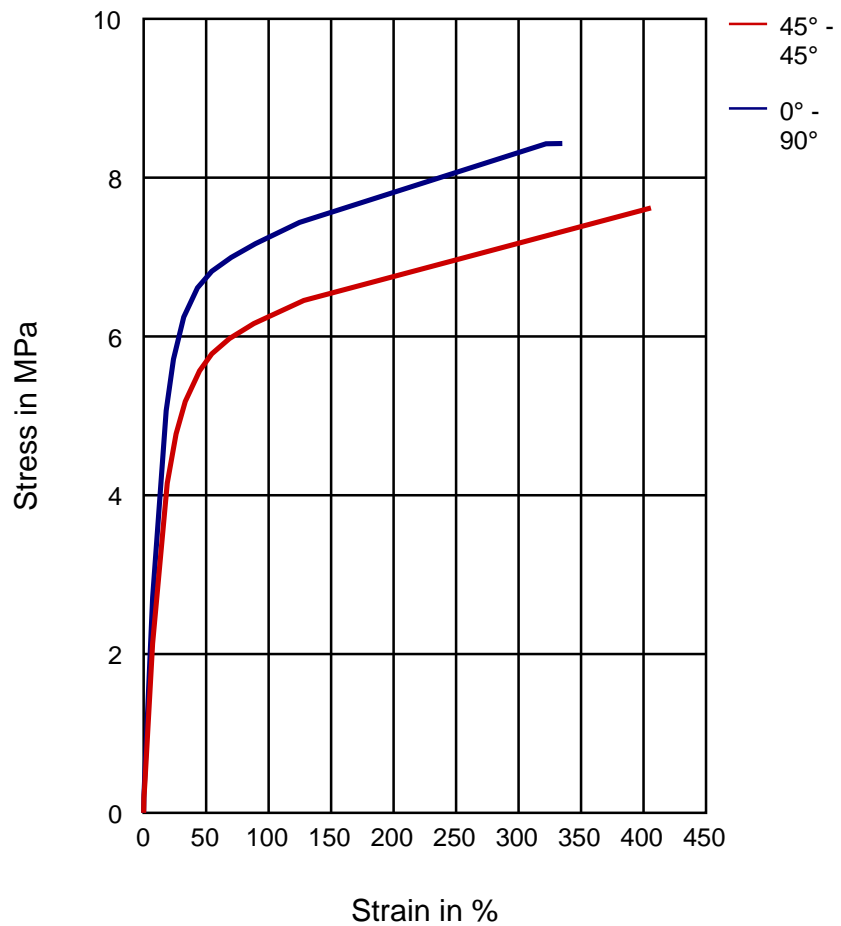
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Stress-Strain (3D print. bars, at var. layer angles)

Stress-Strain (3D print. bars, at var. layer angles)
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