

# Prosilas

## ABS-M30

FDM MATERIAL

		XZ Orientation <sup>(1)</sup>	ZX Orientation <sup>(1)</sup>
<b>Tensile Properties: ASTM D638</b>			
Yield Strength	MPa	<b>30.8 (0.85)</b>	<b>27.5 (0.28)</b>
	psi	<b>4470 (120)</b>	<b>3990 (41)</b>
Elongation @ Yield	%	<b>1.8 (0.043)</b>	<b>1.7 (0.13)</b>
Strength @ Break	MPa	<b>28.1 (0.58)</b>	<b>26.8 (0.84)</b>
	psi	<b>4080 (84)</b>	<b>3890 (120)</b>
Elongation @ Break	%	<b>8.1 (1.5)</b>	<b>1.8 (0.31)</b>
Modulus (Elastic)	GPa	<b>2.40 (0.080)</b>	<b>2.30 (0.16)</b>
	ksi	<b>349 (12)</b>	<b>334 (23)</b>
<b>Flexural Properties: ASTM D790, Procedure A</b>			
Strength @ Break	MPa	<b>No break</b>	<b>47.7 (2.2)</b>
	psi	<b>No break</b>	<b>6910 (320)</b>
Strength @ 5% Strain	MPa	<b>58.7 (0.54)</b>	-
	psi	<b>8510 (78)</b>	-
Strain @ Break	%	<b>No break</b>	<b>3.4 (0.22)</b>
Modulus	GPa	<b>2.22 (0.037)</b>	<b>1.96 (0.064)</b>
	ksi	<b>323 (5.4)</b>	<b>284 (9.3)</b>

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		XZ Orientation <sup>(1)</sup>	ZX Orientation <sup>(1)</sup>
<b>Compression Properties: ASTM D695</b>			
Yield Strength	MPa	<b>88.3 (3.0)</b>	<b>208 (15)</b>
	psi	<b>12800 (440)</b>	<b>30100 (2200)</b>
Modulus	GPa	<b>2.20 (0.11)</b>	<b>2.16 (0.092)</b>
	ksi	<b>319 (17)</b>	<b>314 (13)</b>
<b>Impact Properties: ASTM D256, ASTM D4812</b>			
Notched	J/m	<b>101 (9.9)</b>	<b>32.2 (3.0)</b>
	ft*lb/in.	<b>1.89 (0.19)</b>	<b>0.603 (0.057)</b>
Unnotched	J/m	<b>291 (57)</b>	<b>103 (30)</b>
	ft*lb/in.	<b>5.45 (1.1)</b>	<b>1.93 (0.57)</b>

<sup>1</sup> Values in parenthesis are standard deviations.

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