

TECHNICAL DATA SHEET

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Z-SEMIFLEX

Stays in Shape

Z-SEMIFLEX is a material characterized by a minimal shrinkage level and resistance to greases and chemicals. It is based on TPU 98A which gives your models unique characteristics, including high elasticity and rubber-like properties. Z-SEMIFLEX also exhibits high impact strength which allows you to apply force to a 3D printed model with little risk of damage. These unparalleled qualities make Z-SEMIFLEX ideal not only for prototypes tested in adverse industrial environments, but also for models resembling organs used in medical assessment processes.



Mechanical Properties	Metric	English	Test Method
Tensile Strength	30.44 MPa	4410 psi	ISO 527:1998
Breaking Stress*	3.18 MPa	461 psi	ISO 527:1998
Elongation at max Tensile Stress	524%	524%	ISO 527:1998
Elongation at Break	543.46%	543.46%	ISO 527:1998
Bending Stress	5.7 MPa	827 psi	ISO 178:2011
Flexural Modulus	95.09 MPa	13800 psi	ISO 178:2011
Izod Impact, Notched**	38.88 kJ/m ²	18.5 ft-lb/in ²	ISO 180:2004
Thermal Properties	Metric	English	Test Method
Melting point	180.16° C	356° F	ISO 11357-3:2014
Other Properties	Metric	English	Test Method
Melt Flow Rate	172.4 g/10 min Load 2.16 kg Temperature 225° C	0.38 lb/10 min Load 4.76 lb Temperature 437° F	ISO 1133:2006
Specific Density	1.176 g/cm ³	9.81 lb/gal	ISO 1183-3:2003
Shore Hardness (D)	45	45	ISO 868:1998

* - Specimen breaking: „frayed”

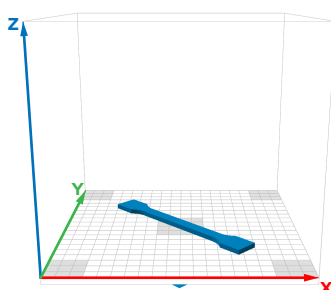
** - Break type: partial P

Compatible with	Layer Thickness Range		Available Colors
ZORTRAX INVENTURE	0.09 mm	0.0035 in	● black
	0.14 mm	0.0055 in	
	0.19 mm	0.0075 in	
	0.29 mm	0.0114 in	

The data presented in this document are intended for information and comparison purposes only. They should not be used for project specifications or its quality evaluation. The material's actual properties depend on the printing process conditions, the design structure and its purpose, test conditions, etc.

Samples of Z-SEMIFLEX used to carry out the tests were built on Zortrax INVENTURE. The general print parameters utilized are noted below:

- Z-SUITE: v2.3.1.0
- Layer thickness: 0.19 mm;
- Quality: High;
- Seam: Normal;
- Infill: Solid,
- Fan Speed: Auto;
- Surface Layers:
 - Top: 7 (default);
 - Bottom: 4 (default);



Product specifications are subject to change without notice.

Each user is responsible for complying with product safety standards, its intended use as well as the law and waste disposal (and recycling) rules for electrical and electronic equipment. Zortrax does not make any express or implied warranties, including but not limited to implied warranties of merchantability or fitness for a particular purpose.



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