

TECHNICAL DATA SHEET

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Z-FLEX is a thermoplastic polyester elastomer that can be 3D printed with at a relatively fast rate of 45mm/s. The filament has great interlayer adhesion and dimensional tolerance falling below +/- 0,02 mm. Z-FLEX is elastic, can bend without breaking, and is resistant to various chemicals including gasoline, ethyl alcohol, butane, and carbon monoxide.

Compared to Z-SEMIFLEX, this filament is a little more elastic. Besides being able to withstand temperatures as high as 70° C, it can maintain its integrity in low temperatures reaching -40° C. Z-FLEX is perfect for 3D printing parts intended to be bent frequently like tires, elastic hinges, or gaskets.

| Mechanical Properties | Metric | Imperial | Test Method |
|----------------------------------|--|--|------------------|
| Tensile Strength | 9.94 MPa | 1440 psi | ISO 527:1998 |
| Breaking Stress | 9.07 MPa | 1320 psi | ISO 527:1998 |
| Elongation at max Tensile Stress | 3120.74% | 3120.74% | ISO 527:1998 |
| Elongation at Break | 3319.12% | 3319.12% | ISO 527:1998 |
| Bending Stress | 3.60 MPa | 522 psi | ISO 178:2011 |
| Flexural Modulus | 53.86 MPa | 7810 psi | ISO 178:2011 |
| Izod Impact, Notched* | 14.61 kJ/m ² | 6.95 ft-lb/in ² | ISO 180:2004 |
| Thermal Properties | Metric | Imperial | Test Method |
| Melting Point | 174.25° C | 346° F | ISO 11357-3:2014 |
| Other Properties | Metric | Imperial | Test Method |
| Melt Flow Rate | 27.98 g/10 min Load 2.16 kg Temperature 225° C | 0.0617 lb/10 min Load 4.76 lb Temperature 437° F | ISO 1133:2006 |
| Specific Density | 1.186 g/cm ³ | 9.90 lb/gal | ISO 1183-3:2003 |
| Shore Hardness (D) | 31 | 31 | ISO 868:1998 |

* - Break type: no break

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-FLEX used to carry out the tests were built on Zortrax M200 Plus.

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.

The Zortrax logo is displayed in a bold, lowercase, sans-serif font.

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