

Roboze PC

PC is a high thermoplastic material for special production of functional parts

FILAMENT PRODUCT SPECIFICATION

PC was developed for Roboze and it based on Polycarbonate. This is a group of thermoplastic polymers containing carbonate groups.

Polycarbonate is an amorphous engineering thermoplastic which is characterised by a high level of mechanical, optical, electrical and thermal properties.

This polymer offers:

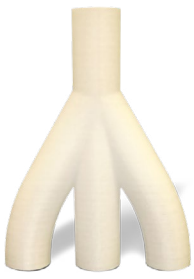
- Extreme toughness
- Low uniform shrinkage
- Dimensional stability
- UV stability
- Heat resistance

Its applications are: automotive, optical devices, healthcare components, electronic equipment , electrical appliance and lighting.

| | MECHANICAL PROPERTIES | Test Method | Build Orientation | | Infill density |
|----------|---------------------------|-------------|-------------------|---------|----------------|
| | | | xz | xy | |
| TENSILE | Tensile Strength Ultimate | ASTM D638 | 70 MPa | 67 MPa | 100% |
| | Tensile Modulus | ASTM D638 | 2.5 GPa | 2.4 GPa | |
| FLEXURAL | Flexural Strength | ASTM D790 | - | 90 MPa | 100% |
| | Flexural Modulus | ASTM D790 | - | 2.3 GPa | |

| THERMAL PROPERTIES | Test Method | Value |
|-----------------------------------|-------------|-------|
| Glass Transition temperature [°C] | ISO 11357-2 | 140°C |
| Heat Deflection (HDT) | ASTM D648 | 120°C |

| OTHERS | Test Method | Value |
|------------------|-------------|------------|
| Density | ISO 1183 | 1,2 g/cm3 |
| Water Absorption | ISO 62 | 0,15 % |
| Hardness | ASTM D785 | 72 shore M |



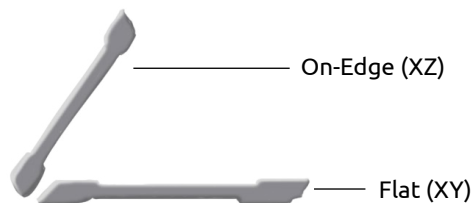
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TEST SPECIMENT SETTING FOR MECHANICAL TESTING

All tests have been made with printed sample in two different orientations on EDGE (XZ) and FLAT (XY).
H.D.T. is the acronyms of Heat Deflection Temperature . The international standard norm ASTM D648 provide the terms to determinate the operating temperature of polymers . Test method need a sample , with standard dimension, subject a load of 455 kPa and 1,82 MPa , after that starts to heat with increase steps of 2° , when the sample arrive an inflection of 0.25 mm , is determinate the h.d.t

XZ= X or "on edge"
XY= Y or "flat"



The performance characteristics of these materials may vary according to application, end use, or operating conditions. Each user is responsible for determining that the Roboze material is safe, technically suitable, and lawful for the intended application, as well as for identifying the proper disposal (or recycling) method consistent with applicable environmental laws and regulations.

The information presented in this document are typical values intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. Actual values will vary with build conditions. Tested parts were built on ROBOZE PLUS 400. Product specifications are subject to change without notice.

Your Smart Solution

Roboze machines are designed to optimize time, reduce costs, and speed up time to market. Our high performing materials are engineered to empower you with unlimited possibilities for all kinds of projects.

The Only Beltless System

Roboze Beltless technology is years ahead in innovation. The patented mechatronic movement system of the X and Y-axes, which directly connects rack and pinion, achieves never before seen real 25-micron layer tolerances.

Find our more on advanced Roboze solutions at **roboze.com** and get in touch with our experts.

See It To Believe It

Request a sample and see for yourself what you can create with our technology and super techno-polymers.

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