

# PCTG

## MATERIAL PROPERTIES

|                   |                        |           |
|-------------------|------------------------|-----------|
| Specific Gravity  | 1.23 g/cm <sup>3</sup> | ASTM D792 |
| Rockwell Hardness | 105 R-scale            | ASTM D785 |

## Mechanical Properties

|                                     |                        |         |
|-------------------------------------|------------------------|---------|
| Tensile Strength at Yield           | 44 MPa                 | ISO 527 |
| Tensile Strength at Break           | 46 Mpa                 | ISO 527 |
| Elongation at Yield                 | 4.4 %                  | ISO 527 |
| Elongation at Break                 | 220%                   | ISO 527 |
| Flexural Strength                   | 60 Mpa                 | ISO 178 |
| Flexural Modulus                    | 1600 Mpa               | ISO 178 |
| Izod Impact Strength Notched @ 23°C | 93°C KJ/m <sup>2</sup> | ISO 180 |

## Thermal Properties

|                             |      |        |
|-----------------------------|------|--------|
| Heat Distortion Temperature |      |        |
| @ 0.455MPa                  | 76°C | ISO 75 |
| @ 1.820 Mpa                 | 64°C | ISO 75 |
| VICAT Softening Temperature | 88°C | DSC    |

## GUIDELINE FOR PRINT SETTINGS\*

|                         |                  |
|-------------------------|------------------|
| Nozzle temperature      | 250-270°C        |
| Bed temperature         | 60-100°C         |
| Active cooling fan      | YES (up to 100%) |
| Layer height**          | 0.05 - 0.30 mm   |
| Shell thickness**       | 0.40 - 2.70 mm   |
| Print speed**           | 40-110 mm/s      |
| Closed chamber          | not necessary    |
| Dry box                 | not necessary    |
| Ruby or hardened nozzle | not necessary    |

\* settings are based on a 0.4 mm nozzle.

\*\* depending on the geometrical complexity

## Disclaimer

The product- and technical data provided in this datasheet is correct to the best of Spectrum Group Sp. z o.o. knowledge and are intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. Actual values may vary according to printing conditions, model complexity, environmental conditions, etc. The user assumes all responsibility for the use of all information provided and shall verify quality and other properties or any consequence from the use of all such information. Typical values are indicative only and are not to be construed as being binding specifications. Spectrum Group Sp. z o.o. shall not be made liable for any damage, injury or loss induced from the use of Spectrum Group Sp. z o.o. materials in any particular application.

## DESCRIPTION

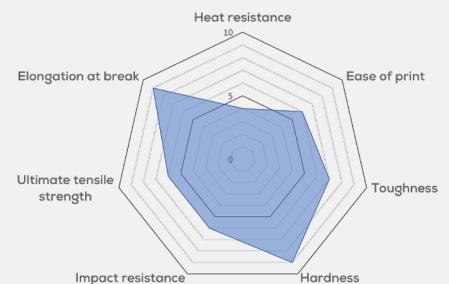
Spectrum Premium PCTG filament is an excellent alternative to PET-G, which is well-known in the 3D printing world. Belonging to the same material family of copolyesters, PCTG filament offers similar ease of printing as PET-G. A very important advantage of the Premium PCTG filament is its increased impact strength, high dimensional stability and low shrinkage. Spectrum Premium PCTG filament combines the most desirable features of Tough PLA and PET-G.

## FEAURES

- higher impact strength than standard PET-G
- higher transparency than standard PET-G (applies to transparent colours)
- ease of printing, processing and finishing
- chemical resistance
- high dimensional accuracy of the printed elements
- hydrophobic, odourless
- excellent print surface

## STORAGE AND SHELF LIFE

Filament should be stored in a dry room at room temperature. Recommended storage temperature is ca. 18-25°C (64.4 -77.0°F). Keep out of moisture, sunlight and direct heat. When stored properly, product has a shelf life of 24 months.



## SUPPORT

If you have any questions or experience any issues, please do not hesitate to contact us at [support@spectrumfilaments.com](mailto:support@spectrumfilaments.com)