Spectrum FILAMENTS

# TECHNICAL DATA SHEET

# PA6 Low Warp GF30

## MATERIAL PROPERTIES

| | | |
|---|---|---|
| Density | 1,34 g/cm³ | EN ISO 1183 |
| Moisture Absortpion (23 ºC / 50% r.h.) | 2,00% | ISO 62 |
| Water Absorption (23 ºC / saturation in water) | 6,5% | ISO 62 |
| **Mechanical properties*** | | |
| Tensile strength (23 ºC, 50 mm/min) | 5500 MPa | EN ISO 527-1 |
| Tensile modulus (23 ºC, 50 mm/min) | 80 MPa | EN ISO 527-1 |
| Elongation at break (23 ºC, 50 mm/min) | >3 % | EN ISO 527-1 |
| Flexural Modulus (23 ºC, 2 mm/min) | 4500 MPa | EN ISO 178 |
| Flexural Strength (23 ºC, 2 mm/min) | 125 MPa | EN ISO 178 |
| Charpy impact strength | | |
| Unnotched @ 23°C | 25 kJ/m² | ISO 179/1eU |
| Notched @ 23°C | 4 kJ/m² | ISO 179/1eU |
| **Thermal properties** | | |
| Heat Deflection Temperature | | |
| 1.8 MPa | 65°C | ISO 75 -1/-2 |
| 0.45 MPa | 180°C | ISO 75 -1/-2 |
| **Tribological properties** | | |
| Thermal coefficient of linear expansion | | |
| 23-80°C long. | 0,7 10-4/K | ISO 11359-1/-2 |
| 23-80°C transv. | 1 10-4/K | ISO 11359-1/-2 |

*dry

## GUIDELINE FOR PRINT SETTINGS*

| | |
|---|---|
| Nozzle temperature | 250-280°C |
| Bed temperature | < 80°C |
| Active cooling fan | 0 - 30% |
| Layer height** | ≥ 0.15mm |
| Shell thickness** | 0.50 - 3.00 mm |
| Print speed** | 30-60 mm/s |
| Closed chamber | recommended |
| Dry box | recommended |
| Ruby or hardened nozzle | recommended |
| Recommended nozzle | ≥ 0.5 mm |
| Drying (if wet) | recommended*** |

* settings are based on a 0,5 mm nozzle.
** depending on the geometrical complexity
*** at least 12h at 80 using a hot dry air oven

## DESCRIPTION

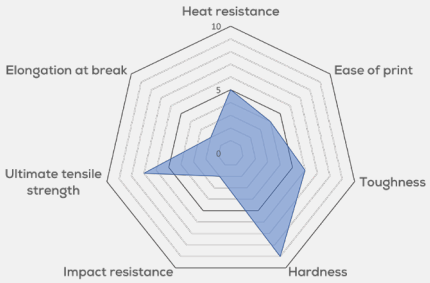
Spectrum PA6 GF30 is another in our range of composite materials based on technical nylon 6 filled with glass fibres. The use of this type of filler is typically applied to increase mechanical refinement in terms of tensile and compressive strength. Spectrum PA6 GF30 is a filament for users who are most concerned with high mechanical performance, high hardness and heat resistance. High glass fibre content provides very low processing shrinkage.

## FEAUTURES

- 30% glass fibres
- high mechanical properties and abrasion resistance
- excellent chemical resistance
- printable on desktop devices without a heated chamber
- matt, carbonised print surface
- perfect bonding of the layers

## 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**

# PA6 Low Warp GF30

**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 Spectum Group Sp. z o.o. materials in any particular application.