Spectrum FILAMENTS

TECHNICAL DATA SHEET

HDPE

MATERIAL PROPERTIES

Physical		
Density	1.1 g/cm³	ISO 1183
Mechanical		
Tensile stress at break	29 Mpa	ISO 527
Elongation at break	18%	ISO 527
Young's Modulus	3.5 GPa	ISO 527
Flexural Modulus	3.2 GPa	ISO 178
Charpy Impact Strength	10 kJ/m²	ISO 179-1
Rockwell Hardness	80 HRM	ISO 2039-2
Thermal properties		
Heat Resistance	110 °C	

GUIDELINE FOR PRINT SETTINGS*

Nozzle temperature	240-290°C
Bed temperature	80-100°C
Recommended printing speed	30-200 mm/s
Cooling	0-50%
Density	1.1 g/cm³
Closed chamber for printing	recommended for larger prints
Dry box recommended	No
Ruby or hardened nozzle recommended	No
Surface finish	shiny
Adhesive	not necessary*

* depending on the geometrical complexity

DESCRIPTION

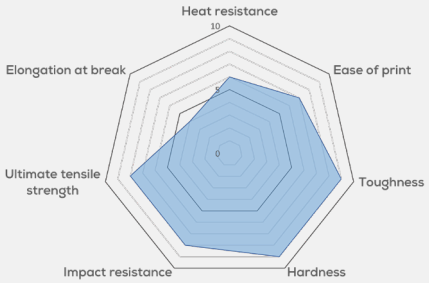
Spectrum HDPE is a modern filament made from high-density polyethylene (HDPE) — one of the most durable and chemically resistant thermoplastics available on the market. It is among the first HDPE filaments in the world featuring Low Warp technology, making it suitable for reliable printing on desktop 3D printers. The innovative formulation developed by Spectrum ensures that HDPE, previously considered difficult to print, is now accessible to every 3D printing user.

FEAUTURES

- One of the world's first HDPE filaments with Low Warp technology – printable on desktop 3D printers
- Heat resistance above 110°C
- Rockwell hardness of 80 HRM – high stiffness and mechanical strength
- Excellent chemical resistance to acids, bases, oils, and solvents
- Outstanding abrasion and crack resistance
- Very low moisture absorption
- UV-stable and weather-resistant
- Fully recyclable

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**