

HDPE

MATERIAL PROPERTIES

Physical

Density	1.1 g/cm ³	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/m ²	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/cm ³
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

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

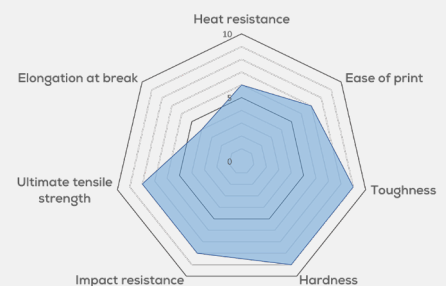
Spectrum HDPE is a modern filament made from high-density polyethylene (HDPE) – one of the most durable and chemically resistant thermoplastics available on the market. It is among the first HDPE filaments in the world featuring Low Warp technology, making it suitable for reliable printing on desktop 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