

# **TECHNICAL DATA SHEET**

# **PLA Thermoactive**

#### **MATERIAL PROPERTIES**

Specific Gravity	1.24 g/cm3	D 792
MFR (210°C, 2.16kg)	6 g/10min	D 1238
Mechanical Properties		
Tensile Strength at Break	53 MPa	D 882
Tensile Strength at Yield	60 MPa	D 882
Tensile Modulus	3.5 Gpa	D 882
Elongation at Break	6,00%	D 882
Elongation at Yield	16 J/m	D 256
Notched Izod Impact Strength	83 MPa	D790
Flexural Strength	3.8 MPa	D790
Thermal Properties		
Heat Distortion Temperature	55°C	E 2092
Glass Transition Temperature	55-60°C	D3418

### **GUIDELINE FOR PRINT SETTINGS\***

Nozzle temperature	190-220°C	
Bed temperature	0-45°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	

<sup>\*</sup> settings are based on a 0,4 mm nozzle.

## 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

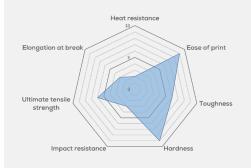
Spectrum PLA Thermoactive is a filament based on pure PLA blended with a thermochromic pigment. Due to this extremely original addition, additive manufactured items change their colour according to the temperature. The colour changes from red to cream once the surface temperature of the item exceeds 30°C. The previous colour is restored gradually once the item reaches its initial temperature.

# **FEAUTURES**

- colour changing ability at ca. 30°C
- warp-free printing
- excellent layer lamination
- · high aesthetic surface quality
- · no shrinkage after cooling

### 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



 $<sup>^{**}</sup>$  depending on the geometrical complexity