



Technical Data Sheet (TDS)

DREMC PET CF filament has high temperature resistance and dimensional stability which make it idea choice for real world application or near finished prototypes for client. Added the long carbon fibre (<10%) improve printable and matte appearance.

Hardened Steel (Wear Resistance Nozzle) and larger than 0.5mm is required as standard and small nozzle will wear within first print or may clog nozzles over time with 0.4mm or smaller nozzle.

Physical Properties

	Testing Method	Typical value
Density	ISO 1183, GB/T1003	1.3 g/cm <sup>3</sup>
Melt index	250°C/2.15Kg	5 g/10min
Moisture Absorption	ISO 62	<0.3%
HDT	ISO 75 / 0.455 MPa	180°C
Continuous Use Temperature	IEC 60216	140°C

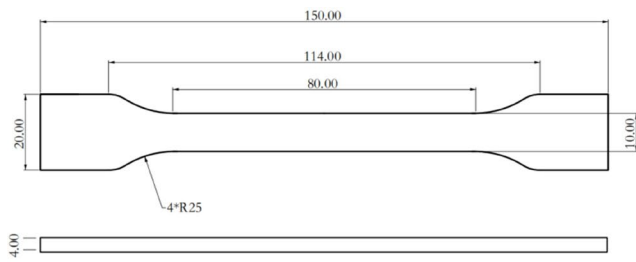
Mechanical Properties

	Testing Method	Typical value
Tensile strength (X-Y)	ISO 527	82 Mpa
Elongation at break (X-Y)	ISO 527	4.5 %
Elongation at break (X-Z)	ISO 527	2%
Flexural Modulus (X-Y)	ISO 527	4700 Mpa
Flexural Modulus (X-Z)	ISO 527	2300 Mpa
Flexural Strength (X-Y)	ISO 178	145 Mpa
Impact Strength	ISO180	28 Kj/m <sup>2</sup>

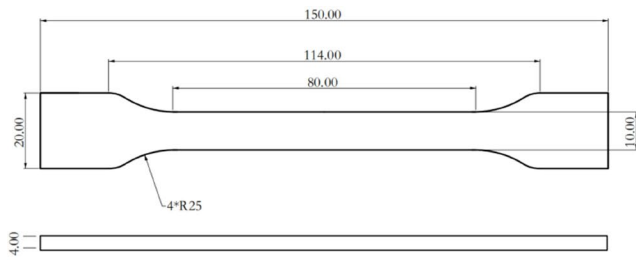
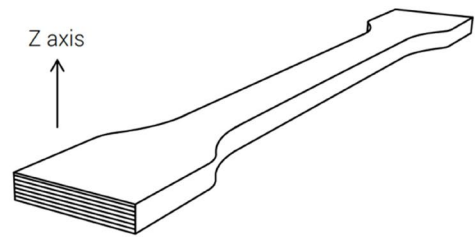
Note: PET CF is a hygroscopic filament which tend to absorb moisture. We recommended to dry them before use or when wet at 65°C for 24hr with filament clamp for cardboard spool, for industrial user we recommend re-spooling to metal spool at dry 90-100c oven for 12 hours.

Printing Tips: Remove supports after model is cooled, after leaving for long period moisture can affect the support removal.

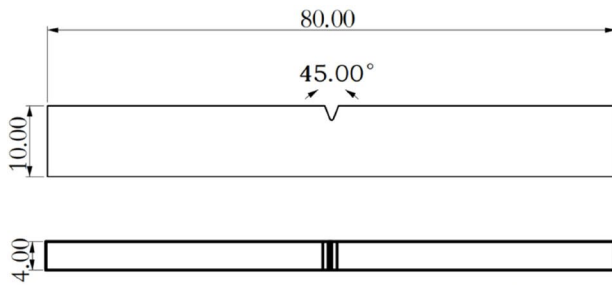
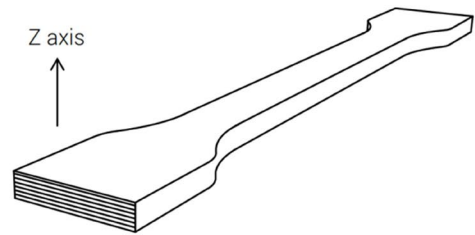
Annealing Tips: 120-130°C for ~6 hours to improve strength (do note, recommend printing with high walls/top layer counts)



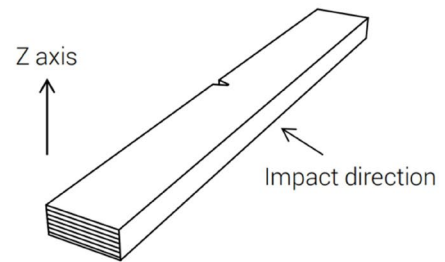
Tensile testing specimen; ASTM D638 (ISO 527, GB/T 1040)



Tensile testing specimen; ASTM D638 (ISO 527, GB/T 1040)



Impact testing specimen; ASTM D256 (ISO 179, GB/T 1043)



**Testing Sample Conditions:**

**Nozzle Diameter 0.6mm**

**Nozzle Temperature: 280 °C**

**Printing Speed: 30-50mm/s**

**Layer: 0.2mm**

**Infill: 100%**

## **DISCLAIMER:**

The typical values presented in this data sheet are intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. Actual values may vary significantly with printing conditions. End- use performance of printed parts depends not only on materials, but also on part design, environmental conditions, printing conditions, etc. Product specifications are subject to change without notice.

Each user is responsible for determining the safety, lawfulness, technical suitability, and disposal/recycling practices of DREMC materials for the intended application. DREMC makes no warranty of any kind, unless announced separately, to the fitness for any use or application. DREMC shall not be made liable for any damage, injury or loss induced from the use of DREMC materials in any application.