Plastics App™

High Performance Filaments

March 10th, 2021 Ver. 1

Perform ✔ QCF

Preliminary Technical Data Sheet

- ✓ Perform ✔ QCF is a first-of-its-kind filament combining reinforced polypropylene with UBQ™ sustainable material, resulting in a low carbon footprint printing material for usage in demanding applications.
- ✓ Perform ✔ QCF has combination of excellent chemical, thermal and mechanical properties. It's designed to help meet your sustainability goals without compromising on performance and product functionality.

Typical Properties

Property	Test Method	Unit	Typ. Value
Nominal Diameter	-	mm	1.75 / 2.85
Density	ISO 1183	gr/cm3	0.96
Flexural Modulus	ISO 178	MPa	1,890
Flexural Strength	ISO 178	MPa	27
Tensile Modulus	ISO 527	MPa	1607
Tensile Strength	ISO 527	MPa	18
Impact Strength IZOD (Notched)	ASTM D 256	J/m	85

* The above are typical properties for a printed specimen

Recommended Settings

Parameter	Unit	Set Value
Nozzle Temp.	˚C	210
Plate Temp.	˚C	105
Cooling (first layers)	-	Off
Cooling	-	On, 100%
Print Speed	mm/sec	20-40
Retraction	mm	>6
Brim	mm	>20

Perform ✔ QCF is prone to warping and separation from platform. Therefore, the use of adhesion sheets along with PP adhesive (such as Magigoo PP) is strongly recommended. Using glue stick as an alternative adhesion method will be insufficient for reliable adhesion of large prints.

Perform ✔ QCF is an abrasive material. It's recommended to use a hardened steel or ruby nozzle – 0.6mm or larger.