

# 3DQF ABS

## TDS

### Technical Data Sheet

#### TDS OUTLINE

This TDS forms the basis of the raw material without the addition of colouring. Any additive, colouring or other will alter the material properties. This TDS deals with the base polymer with no additives or colouring added.

#### CONTACT

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3DQF.UK

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#### SOCIAL MEDIA

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#### PRODUCT OVERVIEW ABS-000

- Product Name: 3DQF ABS
- Description: Made Exclusively for use within FDM 3D Printing
- Material Type: ABS
- Colour : Various

#### PHYSICAL PROPERTIES

- Diameter: 1.75mm & 2.85mm
- Diameter Tolerance:  $\pm 0.03$ mm
- Density: 1.05 g/cm<sup>3</sup>
- Spool Size: (MM) OD198 X ID70 X W76 (MK18 spool)

#### MECHANICAL PROPERTIES

- Tensile Modulus-----1820 MPa
- Tensile Stress Yield (MPa):-----39.0 MPa
- Tensile Strain Yield:-----3.6%
- Flexural Stress (MPa):-----58 MPa
- Flexural Modulus PSI (MPa):-----2140 MPa
- Charpy Notched Impact @ 23°C-----37kJ/M<sup>2</sup>

#### THERMAL PROPERTIES

- Glass Transition Temperature (Tg): -----105-110°C
- Deflection Temperature loaded (1.8MPa) -----97°C

#### PRINTING PARAMETERS

- Extrusion Temperature @ 60-120mm/s:----- 250-260°C
- Extrusion Temperature @ 120-250mm/s:-----260-280°C
- Extrusion Temperature @ 250-400mm/s:-----300°C
- First Layer temperature:-----250°C
- Bed Temperature: 100°C
- Print Speed: 80-300 mm/s
- Cooling Fan: Zero cooling first layer, 100% thereafter
- Chamber temp minimum 35°C
- Pre heat Chamber before starting Print minimum 35°C
- If the print exhibits weak layer strength a higher hot end temp is required or a lower print speed.

## **DRYING REQUIREMENTS**

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- *Drying equipment: Dry Box with desiccant or heated drying box*
- *Drying temp: Maximum 40°C (without spool locking inserts)  
Drying Time :2-4 Hours*

## **STORAGE AND HANDLING**

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- *Storage Conditions: Protect against moisture, dust and direct sunlight*
- *Shelf Life: In correct storage conditions 3+ years*
- *Handling Precautions: Never leave the end of filament free, always use holding straps on the side of the spool.*
- *Drying Process: Care should be taken when drying filament, do not exceed 40°C.*
- *Unloading, Edge roller unloading will require printed rings (Contact for details)*

## **SAFETY DATA**

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- *MSDS Availability: Raw Material Safety Data Sheet (MSDS) is available Upon request*
- *Certifications and Standards: Product is made to exceed ISO 5425:2023 although not ISO Certified we maintain best practice as we work toward certification.*
- *EN73 Part 3 Colouring certification available upon request*
- *Always use in well-ventilated area*

## **TECHNICAL SUPPORT**

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*Warranty: We stand fully behind our filament if you have any issue please contact with us for technical assistance, Return, Refund or Replacement process.*

*Revision Date:01/01/2020 V3*

## **CONTACT DETAILS**

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