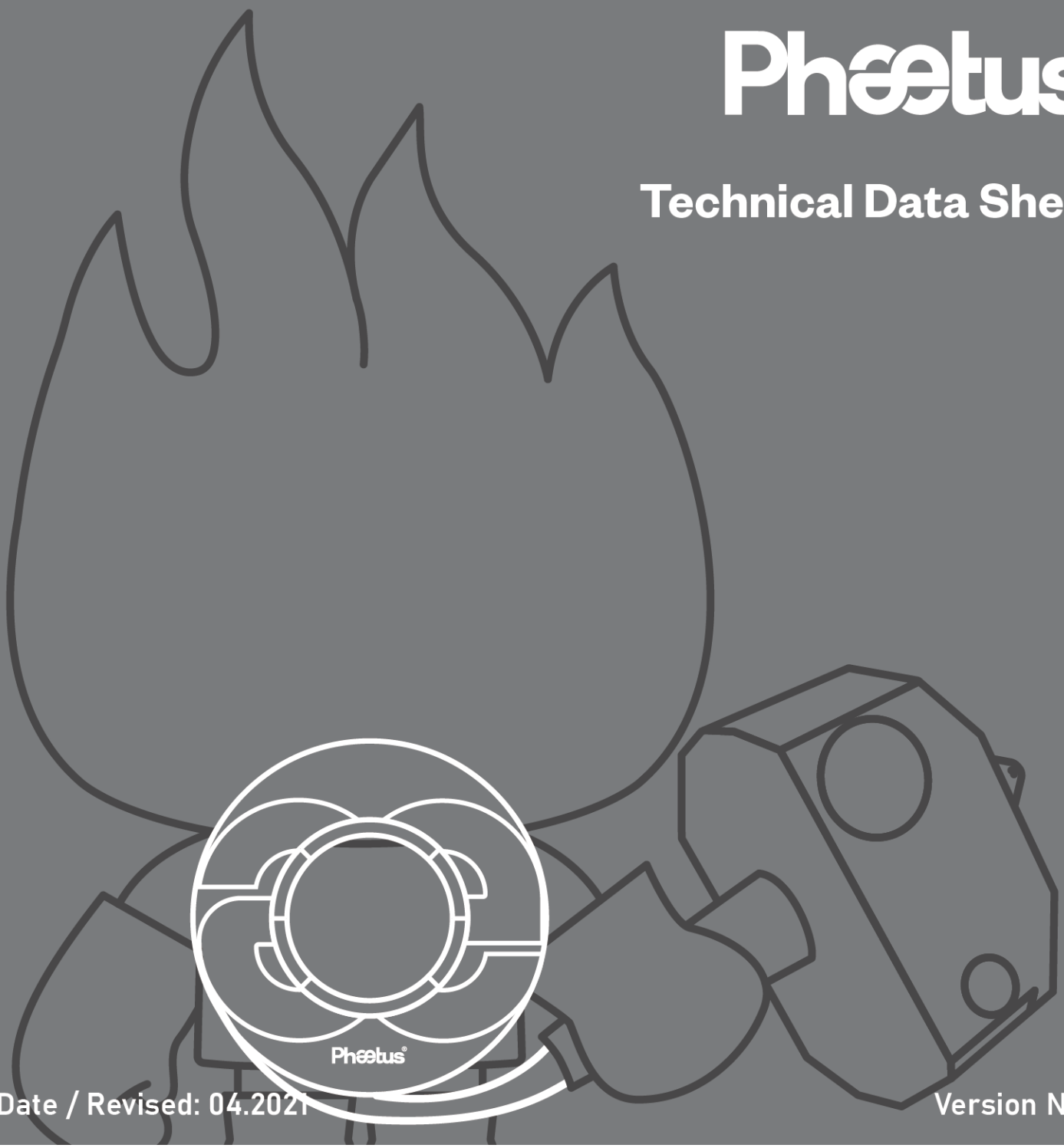
Phœtus®

Technical Data Sheet



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WELCOME

Supreme Pursuit.

www.phaetus.com

Company Introduction

About us

Phaetus is committed to the design of high-end 3D printing sprinkler head system and the development of printing material process, provides customers with printer software and hardware integration solutions. For example, in order to solve the problem of low precision, poor temperature resistance and short life of the nozzle on the market, we independently developed and have a Ruby Nozzle suitable for printing special materials; To solve the problem of hotend thermal efficiency and heat dissipation caused by molten deposition, we developed Dragon Hotend with independent intellectual property rights to meet the purchase/customization needs of 3D printing equipment manufacturers. Phaetus will not change its direction and goal of providing high-end product design and solutions to global 3D printing customers through continuous product innovation to solve customers' pain points.

Our Faith

Gathered under the Phaetus brand, we are full of awe for Hephaestus, the God of fire, stone masonry, sculpture and the founder of craftsmen in ancient Greek mythology. Outstanding products come from the extreme pursuit of details. We insist on the craftsman spirit of dedication, excellent, focus and innovation in the field of 3D printing.

Contact us

For any inquiries or technical support, please contact: **support@phaetus.com**

aeFree™ S-Green

aeFree™ S-Green Quick-Remove Support Material

Product Description

aeFree™ S-Green Quick-Remove Support Material can achieve fast and easy peeling by adjusting the bonding strength to the support surface of the body material and the bonding strength of S-Green itself.

S-Green Quick-Remove Support Material does not require the use of water or solvents during the removal of the support and does not produce water pollution, which is safe and environmentally friendly. It can be used in dual printhead FDM printers or 2-in/1-out FDM printers.

aeFree™ S-Green Quick-Remove Support Material is compatible with the following Phaetus industrial grade material product:
aeForce™ ToughPA / aeForce™ EasePA-GF / aeForce™ EasePA-CF

Product Advantages

• Adhesion Bonding Technology

aeFree™ S-Green can provide a moderate bond strength to the body material through formulation and process modifications, which ensures that the body material can be molded to the support surface and can be easily separated from the support surface of the body material during removal of the support.

• Quick Remove Technology

aeFree™ S-Green has dramatically reduced its own interlayer bond strength through formulation and process modifications, and can be easily teared apart during removal process.

• ECO Friendly

The aeFree™ S-Green does not require the use of water or solvents during the use process, does not produce water pollution, and is safe and environmentally friendly.

Available

Colors	Green
Diameter	1.75mm/2.85mm
Net weight	250g/500g/1kg

Material Properties

Property	Testing method	Typical value
Density	ISO 1183	1.26 g/cm³
Water absorption	ISO 62:Method 1	0.4 %
Melting temperature	ISO 11357	167℃
Melt index	280℃, 2.16kg	11

Recommended printing conditions

Nozzle temperature	280-290℃
Recommended nozzle diameter	0.4-1.0mm
Recommended build surface treatment	Coating with PVP glue
Build plate temperature	60-80℃
Raft separation distance	0mm
Recommended Support Infill Ratio	15%-20%
Recommended Dense Support Layers	3-5
Vertical Offset Top/Down Layers	0
Cooling fan speed	Closed or 20%
Print speed	30-120 mm/s
Retraction distance	3-6 mm
Retraction speed	1800-3600 mm/min
Suitable materials	aeForce™ ToughPA aeForce™ EasePA-GF aeForce™ EasePA-CF

Additional Suggestions:
1. aeFree™ S-Green is very easy to absorb moisture within the environment, and printing after absorbing moisture will result ozzing, extruding with bubbles and rough surface appearance, thus reducing print quality. It is recommended that put the filament into a dry box (humidity below 15%) immediately after opening the aeFree™ S-Green vacuum foil bag for printing. Please put the unused filament back into the original aluminum foil bag for sealed storage.

2. After the material is damp, there will be more printing ozzing, bubbles extruded and rough printing surface. Please dry the filament in an oven at 80-100°C for 4-6h to restore the printing quality of aeFree™ S-Green.

3. It is recommended to use hardened steel and above grade nozzles made by Phaetus, which can effectively improve the print quality. Besides, it is recommended that the thickness of the heatblock is longer than12mm.

4. In dual-extruder printing mode, the material in the standby nozzle will deteriorate due to prolonged heating, and the deteriorated material needs to be squeezed out before the print nozzle is switched, so it is necessary to use the Wipe wall or Wipe tower function in the slicing software.

5. After the printing is completed, the printed part can be annealed and then the aeFree™ S-Green removal step can be performed. During the annealing process, aeFree™ S-Green can play the role of supporting the body material, reducing the dimensional deformation of the body material and improving the mechanical properties of the body material. Annealing conditions: set according to the requirements of the body material.

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