

Materials For Better Builds

3D Printing Filament / Manufacturer Catalogue



Made In The UAE

Ordinary / Speciality / FilaENG

From everyday models to engineered components.

01 / Company

Polymer Expertise. Made Here

**Ras Al Khaimah / United Arab Emirates**

From Formulation To Finished Filament

FilaTech develops and manufactures plastic filaments for FDM 3D printing, bringing polymer knowledge and production experience together at its UAE facility.

Our background in plastic compounding connects material selection with extrusion, dimensional control and practical printing support.

Making It Better

A material partner for makers, education, design teams and industry.

Knowledge

Material expertise that supports informed selection.

Innovation

A range spanning daily printing and engineered applications.

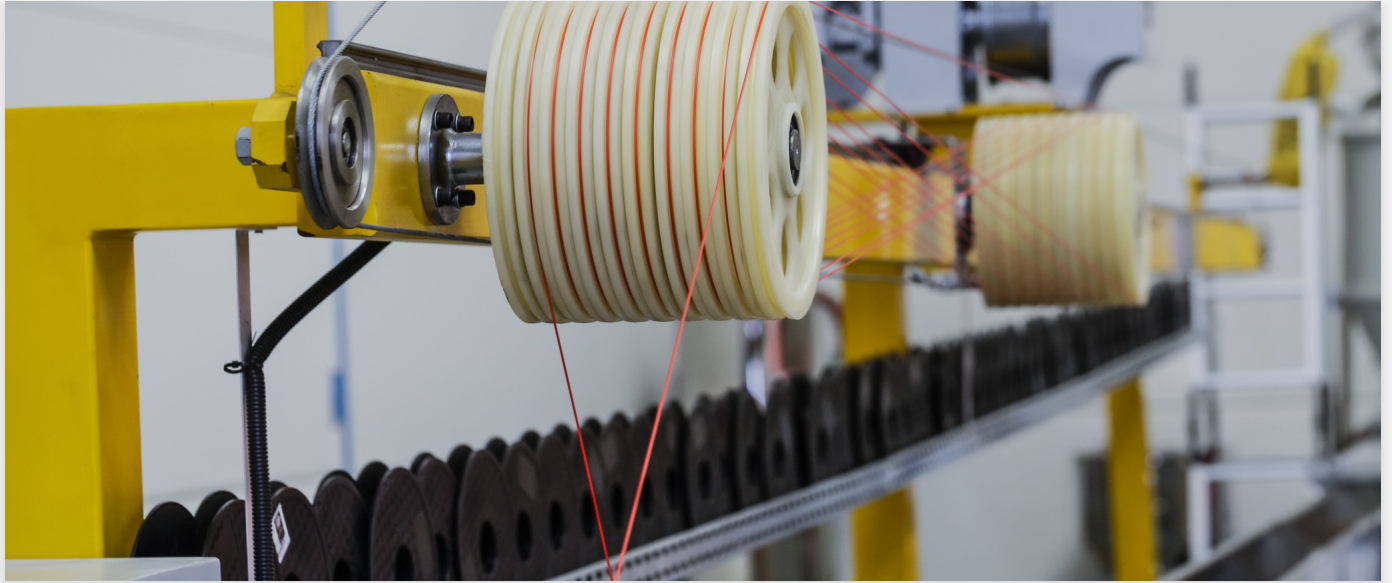
Collaboration

Product data and technical support from the manufacturer.

02 / Production

Precision Through Every Stage

Material preparation, controlled extrusion, inspection and finishing in one manufacturing process.



01 Prepare And Blend

Weighing, drying and dehumidification prepare polymers for mixing and extrusion.

02 Extrude And Cool

Controlled extrusion and water cooling form the continuous filament.

03 Control And Wind

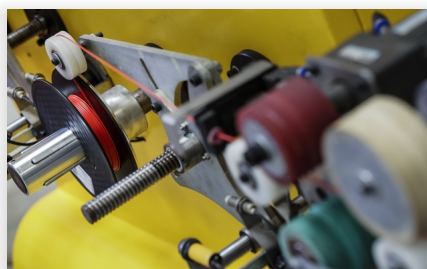
Diameter and roundness checks support haul-off and consistent spool winding.

04 Inspect And Pack

Colour and printing checks support labelling, vacuum packing and dispatch.



Dimensional measurement



Controlled winding



Vacuum packaging

03 / Packaging

The Right Scale For Your Run

Four spool formats for material trials, everyday printing and extended production builds.



0.5 kg **Compact**

Trials and smaller jobs



1.0 kg **Everyday**

Workshop and studio printing



3.0 kg **Extended Run**

Long builds with fewer changes



6.0 kg **Large Format**

Sustained material supply

Protected From Winding To Dispatch

Labelled spools are vacuum packed and protected in retail boxes or larger spool cartons. Specify material, colour, diameter and net spool weight when ordering.

Confirm available combinations and spool-holder compatibility for your printer.

04 / Materials

One Range. More Possibilities

24 products across three familiar FilaTech material families.

01

Ordinary

Commercial: PLA, PLA+, ABS, PETG

Hyper: Hyper PLA, Hyper ABS, Hyper PETG

06-09



02

Speciality

PA, PC, ASA, HIPS

TPU, TPU+, TPE, WPLA

10-13



03

FilaENG

FilaPLA, FilaTough

FilaCarbon-ABS, -PLA, -PETG, -PA

FilaFlexible30, 40, 55

14-18



Diameter And Ordering

Nominal diameters: 1.75 mm and 2.85 mm. Product datasheets state a tolerance of ± 0.03 mm. The print settings shown here refer to 1.75 mm filament.

Print Guidance 19 / Website, UAE Store And App 20

Ordinary / Commercial

Everyday Detail And Finish

Print temperatures: first layer / subsequent layers. Setup guidance on page 19.

PLA



Everyday Detail And Dependable Printing

A low-warp polylactic acid filament for clean, detailed models and everyday prototyping. High rigidity and straightforward processing make PLA a practical starting point for desktop FDM printing.

- Low shrinkage
- Crisp detail
- Broad colour range

Density 1.25 g/cm³

Tensile strength ≥55 MPa | GB/T1040

Typical Uses

Concept models, display pieces and educational projects

Nozzle °C
205 / 200

Bed °C
60 / 55

PLA+



Premium PLA For Refined Print Quality

A premium PLA grade developed for consistent print quality and low-warp processing. PLA+ retains the accessible printing characteristics of PLA for presentation models and detailed parts.

- Clean surface finish
- Low shrinkage
- High rigidity

Density 1.24 g/cm³

Tensile strength 45 MPa | ISO 527-1

Typical Uses

Presentation models, detailed prototypes and decorative parts

Nozzle °C
205 / 200

Bed °C
60 / 55

Ordinary / Commercial

Functional Materials

Print temperatures: first layer / subsequent layers. Setup guidance on page 19.

ABS



Toughness For Functional Parts

A durable thermoplastic that combines rigidity with ductility. ABS is suited to functional prototypes and components where greater toughness than standard PLA is useful.

- Tough and ductile
- Heat-resistant material
- Post-processable

Density 1.03 g/cm³

HDT, unannealed 85 °C at 1.8 MPa | ASTM D648

Typical Uses

Housings, fixtures and functional prototypes

Nozzle °C
255 / 255

Bed °C
110 / 100

PETG



Versatile Strength With Low Warping

A glycol-modified polyester for strong, versatile prints. PETG combines low warping with toughness and good bridging, making it useful for larger prototypes and everyday functional components.

- Low warping
- Tough prints
- Good bridging

Density 1.27 g/cm³

HDT 70 °C at 0.455 MPa | ASTM D648

Typical Uses

Brackets, enclosures and larger functional models

Nozzle °C
240 / 235

Bed °C
90 / 85

Ordinary / Hyper

Engineered For Higher Speed

Print temperatures: first layer / subsequent layers. Setup guidance on page 19.

Hyper PLA



Detailed Models At Higher Throughput

A PLA grade formulated for smooth extrusion at higher print speeds. Hyper PLA brings low shrinkage and sharp detail to compatible high-speed FDM systems.

- High-speed formulation
- Low shrinkage
- Fine surface detail

Density 1.24 g/cm³

Tensile strength 50 MPa | GB/T1040

Typical Uses

Rapid model iteration and high-throughput visual prototypes

Nozzle °C
220 / 220

Bed °C
60 / 55

Hyper ABS



Functional Printing At Higher Speed

A high-speed ABS formulation designed for smooth melting and extrusion. It combines the toughness of ABS with the processing behaviour needed for faster production of functional models.

- High-speed formulation
- Toughness
- Heat resistance

Density 1.02 g/cm³

Tensile strength 45 MPa | ISO 527

Typical Uses

Rapid functional prototypes, housings and workshop components

Nozzle °C
265-270 / 265-270

Bed °C
100 / 90

Ordinary / Hyper

More Throughput. More Scale

Hyper PETG



Fast Extrusion With Versatile Performance

A high-speed PETG grade formulated for smoother, faster extrusion while retaining the low-warp characteristics of the PETG family. A versatile choice for repeated prototypes and functional builds.

- High-speed formulation
- Low warping
- Smooth finish

Density 1.29 g/cm³

HDT 77 °C at 0.45 MPa | ASTM D648

Typical Uses

Production prototypes, enclosures and repeated functional builds

Nozzle °C
250 / 255

Bed °C
70 / 70

400-600 mm/s

A Reference Target For Capable Systems

The Hyper range targets higher-speed printing on compatible, calibrated systems. Achievable speed depends on hotend flow, nozzle, layer height and geometry.

Begin with the material profile, calibrate flow and cooling, and check a first article before a longer run.

Hyper PETG / 6.0 kg spool shown

Speciality

Strength For Demanding Parts

Print temperatures: first layer / subsequent layers. Setup guidance on page 19.

PA



Nylon For Durable Working Components

A strong, durable nylon filament with excellent inter-layer adhesion. Thin sections can flex, while the material provides toughness for demanding functional geometries.

- Strong layer adhesion
- Toughness
- Flex in thin sections

Density 1.14 g/cm³

Tensile yield stress 80 MPa | ISO 527-1,2

Typical Uses

Living hinges, durable prototypes and functional mechanisms

Nozzle °C
270 / 270

Bed °C
110 / 100

PC



Impact Strength And Thermal Capability

A tough polycarbonate filament for demanding prototypes and components. PC combines impact resistance with elevated-temperature performance and optical clarity in natural grades.

- High impact resistance
- Thermal performance
- Toughness

Density 1.20 g/cm³

HDT 137 °C at 0.45 MPa | ISO 75-1,2

Typical Uses

Robust housings, functional prototypes and engineering models

Nozzle °C
275 / 275

Bed °C
110 / 100

Speciality

Weather Resistance And Support

Print temperatures: first layer / subsequent layers. Setup guidance on page 19.

ASA



Weather-Resistant Material For Outdoor Designs

An acrylic-rubber-modified styrenic material combining ABS-like mechanical characteristics with weather resistance and colour stability. ASA is intended for designs exposed to outdoor conditions.

- Weather resistance
- Colour stability
- Toughness

Density 1.07 g/cm³

Tensile strength 46 MPa | ISO 527

Typical Uses

Outdoor housings, covers and exposed prototypes

Nozzle °C
250 / 270

Bed °C
100 / 100

HIPS



Impact-Modified Material And Soluble Support

High-impact polystyrene can serve as a modelling material or a soluble support alongside ABS in compatible dual-extrusion systems. It is soluble in limonene.

- Limonene-soluble
- Impact-modified
- Support capability

Density 1.07 g/cm³

Vicat softening 99 °C | ASTM D1525

Typical Uses

Dual-extrusion supports, models and prototypes

Nozzle °C
230 / 225

Bed °C
100 / 110

Speciality

Elasticity In Every Layer

Print temperatures: first layer / subsequent layers. Setup guidance on page 19.

TPU



Flexible Parts With Abrasion Resistance

An elastic polyurethane filament with resistance to oil, grease and abrasion. TPU provides good layer adhesion and flexural fatigue resistance for flexible components.

- Elastic response
- Abrasion resistance
- Good layer adhesion

Density 1.20 g/cm³

Tensile strength 30 MPa | ASTM D412

Typical Uses

Protective covers, flexible grips and compliant prototypes

Nozzle °C
230 / 235

Bed °C
50 / 50

TPU+



Modified TPU For Flexibility And Resilience

A modified polyurethane filament developed for improved flexibility and resilience. TPU+ combines elastic behaviour with good tear and abrasion resistance.

- Enhanced resilience
- Flexible response
- Tear resistance

Density 1.19 g/cm³

Tensile strength 30 MPa | ASTM D412

Typical Uses

Flexible covers, cushioning elements and resilient prototypes

Nozzle °C
210 / 205

Bed °C
50 / 50

Speciality

Soft Touch. Natural Character

Print temperatures: first layer / subsequent layers. Setup guidance on page 19.

TPE



Soft Rubber-Like Flexibility

A soft thermoplastic elastomer for parts that bend and flex. TPE is useful when rubber-like behaviour is more important than rigidity and benefits from a controlled filament path.

- Soft feel
- High flexibility
- Flexural fatigue resistance

Density 1.06 g/cm³

Hardness 80 Shore A | ASTM D2240

Typical Uses

Flexible stoppers, soft covers and compliant models

Nozzle °C
230 / 225

Bed °C
50 / 50

WPLA



Natural Wood Character In A PLA Composite

Wood fibres in a PLA carrier create a wood-like appearance with low shrinkage and good rigidity. WPLA brings a distinctive surface character to decorative and presentation pieces.

- Wood-like finish
- Low shrinkage
- Rigid printed parts

Density 1.05 g/cm³

Tensile strength 35 MPa | ASTM D638

Typical Uses

Decorative models, display pieces and architectural details

Nozzle °C
215 / 210

Bed °C
60 / 55

FilaENG / Engineering Compounds

Beyond Standard Polymers

Print temperatures: first layer / subsequent layers. Setup guidance on page 19.

FilaPLA



Engineering PLA With Enhanced Heat Resistance

A PLA-based engineering compound developed for greater toughness and thermal performance while retaining approachable printing behaviour. Annealing develops its maximum heat-deflection performance.

- Enhanced toughness
- Low shrinkage
- Good bridging

Density 1.30 g/cm³

HDT, crystallised 100 °C at 0.455 MPa | ASTM D648

Typical Uses

Functional models and heat-exposed prototypes after validation

Nozzle °C
235 / 230

Bed °C
50 / 50

FilaTough



A Balance Of Toughness And Flexibility

An engineering compound combining toughness, chemical resistance and thermal performance. FilaTough balances hardness with flexibility for demanding functional applications.

- High toughness
- Oil/chemical resistance
- Low moisture uptake

Hardness 63 Shore D | ASTM D2240

HDT 130 °C at 0.455 MPa | ASTM D648

Typical Uses

Resilient functional parts, fixtures and engineering prototypes

Nozzle °C
245 / 240

Bed °C
80 / 80

FilaENG / Carbon Composites

Reinforced For Function

Print temperatures: first layer / subsequent layers. Setup guidance on page 19.

FilaCarbon-ABS



FilaCarbon family packaging shown

Carbon-Reinforced ABS For Functional Designs

An ABS-based carbon-fibre compound for tough, dimensionally stable parts. The material produces a textured finish with low shrinkage and warping.

- Carbon-fibre reinforcement
- Textured finish
- Dimensional stability

Density 1.14 g/cm³

Colour Carbon black

Typical Uses

Functional fixtures, rigid housings and engineering prototypes

Nozzle °C
255 / 255

Bed °C
80 / 80

FilaCarbon-PLA



FilaCarbon family packaging shown

Carbon Texture With Accessible PLA Processing

A PLA-based carbon-fibre composite for stable printing and a professional textured surface. It offers low shrinkage and a practical route to carbon-filled FDM parts.

- PLA carrier
- Carbon-fibre reinforcement
- Low warping

Density 1.20 g/cm³

Tensile strength 66 MPa | ISO 527

Typical Uses

Rigid models, textured presentation parts and prototypes

Nozzle °C
230 / 230

Bed °C
80 / 80

FilaENG / Carbon Composites

Stability With A Textured Finish

Print temperatures: first layer / subsequent layers. Setup guidance on page 19.

FilaCarbon-PETG



FilaCarbon family packaging shown

Carbon-Filled PETG For Stable Functional Prints

A PETG-based carbon-fibre compound combining a tough carrier with a textured finish. Low shrinkage and dimensional stability support functional prototyping.

- PETG carrier
- Carbon-fibre reinforcement
- Textured finish

Density 1.14 g/cm³

Tensile strength 55 MPa | ISO 527

Typical Uses

Housings, brackets and dimensionally stable prototypes

Nozzle °C
260 / 260

Bed °C
80 / 80

FilaCarbon-PA



FilaCarbon family packaging shown

Carbon-Reinforced Nylon For Rigid Components

A PA6 composite reinforced with short carbon fibres. FilaCarbon-PA combines rigidity and strength with reduced shrinkage and a matte, textured surface.

- PA6 carrier
- High rigidity
- Matte surface finish

Density 1.16 g/cm³

Tensile strength 104 MPa | ISO 527

Typical Uses

Rigid functional parts, fixtures and engineering prototypes

Nozzle °C
270 / 270

Bed °C
80 / 80

FilaENG / Flexible Engineering

Choose Your Flexible Response

Print temperatures: first layer / subsequent layers. Setup guidance on page 19.

FilaFlexible30



The Softest FilaFlexible Engineering Grade

A TPEE-based engineering compound combining rubber-like resilience with flexible processing. Grade 30 is the softest of the three FilaFlexible materials.

- Rubber-like resilience
- Chemical resistance
- UV resistance

Hardness 30 Shore D | ASTM D2240

HDT 50 °C at 0.455 MPa | ASTM D648

Typical Uses

Soft flexible prototypes, compliant elements and protective parts

Nozzle °C
235 / 235

Bed °C
50 / 50

FilaFlexible40



Balanced Flexibility And Resilient Response

A mid-hardness TPEE-based engineering filament for resilient components. Grade 40 combines flexibility with a firmer response than FilaFlexible30.

- Balanced flexibility
- Resilience
- Low moisture uptake

Hardness 40 Shore D | ASTM D2240

HDT 50 °C at 0.455 MPa | ASTM D648

Typical Uses

Flexible functional models, grips and protective components

Nozzle °C
235 / 235

Bed °C
50 / 50

FilaENG / Flexible Engineering

Resilience With Shape Retention

FilaFlexible55



The Firmest FilaFlexible Engineering Grade

A TPEE-based engineering compound with a firmer flexible response and the highest heat-deflection value in the FilaFlexible family. Grade 55 suits resilient functional designs where shape retention matters.

- Firm flexible response
- Resilience
- Thermal performance

Hardness 55 Shore D | ASTM D2240

HDT 105 °C at 0.455 MPa | ASTM D648

Typical Uses

Resilient functional components and demanding flexible prototypes

Nozzle °C
235 / 235

Bed °C
50 / 50

The FilaFlexible Family

Three Grades A Range Of Responses

30 Shore D

FilaFlexible30

HDT 50 °C

Softer compliance

40 Shore D

FilaFlexible40

HDT 50 °C

Balanced flexibility

55 Shore D

FilaFlexible55

HDT 105 °C

Firmer resilience

HDT at 0.455 MPa, ASTM D648. Hardness and heat deflection describe different properties; qualify the printed part for its application.

Earlier packaging may show FilaFlex labels.

05 / Print And Qualify

A Good Print Starts With Setup

Use the catalogue for selection, then confirm the material profile against the full TDS and your printer.

Reading The Product Cards

Nozzle and bed temperatures are shown as first layer / subsequent layers. The reference configurations are for 1.75 mm filament, tested on Prusa, Creality and Bambu Lab printers. They are starting points, not guaranteed production settings.

Ordinary And Hyper

PLA, PLA+, PETG: direct or Bowden feed, cooling ON/Auto. ABS: heated bed and controlled shrinkage. Hyper: verify flow capacity before targeting 400-600 mm/s.

PA, PC, ASA And HIPS

Use an enclosure. Dry PA carefully. PA and PC start with cooling OFF; check printer temperature capability. ASA and HIPS need a heated bed and material-specific adhesion setup.

Flexible Materials

TPU and TPU+: direct drive or a carefully tuned Bowden path. TPE: direct drive and at least a 0.6 mm nozzle. FilaFlexible30: take precautions with Bowden; FilaFlexible55 reference specifies an enclosure.

Wood And Carbon Composites

Use a wear-resistant nozzle of at least 0.6 mm for WPLA and FilaCarbon. For FilaCarbon-PA the TDS calls for an enclosure; confirm the bed profile against the full datasheet.

Engineering Compounds

FilaPLA: the 100 °C HDT value requires annealing at 80 °C for 30 minutes; validate dimensions. FilaTough: start with cooling OFF and validate chemical compatibility.

Material Values / Printed-Part Performance

Selected properties are values from the FilaTech TDS files. Orientation, infill, moisture and processing affect finished parts. HDT is a test at a stated load, not a continuous-use temperature. Keep filament dry and sealed; request the full TDS and current batch documentation for qualification.

06 / Stay Connected

Your Next Build Starts Here

Explore. Order. Print

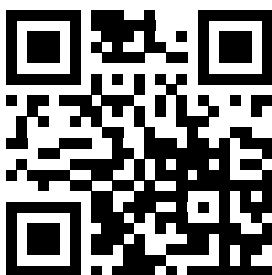
Material information and support, wherever you work.



Website

Explore our material range.

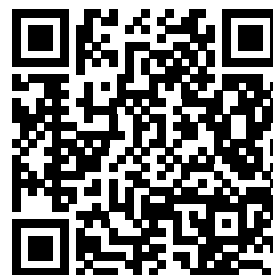
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UAE Store

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Open and install the app.

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App installation: open the link on your phone, then choose Install app or Add to Home Screen where available.

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Making It Better



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