



Tectonic^{3D}

Material Cards

March 2026

Technical Filament for Technical Application

PRODUCT RANGE

- Aura ABS EC
- Aura ASA+
- Kratir PP CF (AO)
- Kratir PETG CF
- Kratir PA6/66 CF
- Kratir PA11 CF
- Kratir PET CF
- Kratir rPPS CF
- Zephyr PA11CF MC
- Anasa TPC 80A & 95A
- Atar PPO
- Pyra PC/ABS FR
- Other FR Grades
- Proteos & Lava

Tectonic^{3D}

Aura ABS EC



BASE MATERIAL FEATURES



Manufactured through continuous mass polymerization technology, resulting in a more consistent, thermal stable, low gloss and reliable product



Using an Automotive high heat grade, vicat of 108°C (+10%)



Key benefits: bright white color, low gels (high end aesthetics) and low VOC (volatile organic compound), means less odor



Better UV stability compared to other ABS manufacturing processes (ASA is the best in UV resistance)



Shorter pre-drying times, thus improving machine utilization



Also available in 80% bio-mass balance (on request)

PRINTING PERFORMANCE



Easy to print on wide range of machines



Stiffer than our AURA ASA+

APPLICATIONS



- Automotive
- Industrial Machine Manufacturing

Base material is approved by many OEMs, like BMW (GS93016), Audi (TL527A,B), Daimler, Chrysler, GM, Ford, JLR, PSA

TENSILE MODULUS [MPA]



AVAILABLE IN
A VARIETY OF COLOURS

AVAILABLE IN
DIFFERENT SPOOL WEIGHTS



Tectonic^{3D} Aura ASA+

BASE MATERIAL FEATURES



Excellent weatherability



Suitable for outdoor use with respect to exposure to ultraviolet light, water exposure and immersion in accordance with UL 746 (F1)



High impact strength



Modified for better bed adhesion and low warpage



PRINTING PERFORMANCE



Easy to print on wide range of machines



High speed printing: 21mm³/s (200mm/s)

VOICE OF CUSTOMER

"TECTONIC ASA+ offers superior mechanical properties compared to PLA and PET. It allows for faster printing speeds while maintaining high quality results, enabling quicker delivery of parts to end-users. Unlike standard ASA, Tectonic-3d ASA+ exhibits minimal warping, enhanced mechanical strength and superior surface finish. Additionally, Tectonic-3d offers detailed data sheets with material properties printed in various orientations and offers complete material traceability."

Max Nijpels

Marine Innovatie Cluster

APPLICATIONS



- Applications where a combination of UV resistance, impact (shock) resistance and high-speed printing is needed
- Outdoor applications
- Drones

WARPAGE TEST: ASA against ASA+



Print speed: 200mm/s
Temperature nozzle: 260 °C
Temperature bed: 90 °C
Layer: 0.2 mm
Brim: 5mm

AVAILABLE IN
A VARIETY OF COLOURS

AVAILABLE IN
DIFFERENT SPOOL WEIGHTS

Tectonic^{3D}

Kratir PP CF (AO)



BASE MATERIAL FEATURES



Light weight base material
(1.07 g/cm³)



Carbon fibers for high
stiffness



Excellent chemical
resistance



Adhesion optimized version
available

PRINTING PERFORMANCE



Easy to print on different machines,
even in ambient conditions



Outstanding strength at high-speed
printing: 27mm³/s (250mm/s)

VOICE OF CUSTOMER

"The use of this filament made it possible to reduce the weight of the fuselage of the printed drone by 30% without losing strength."

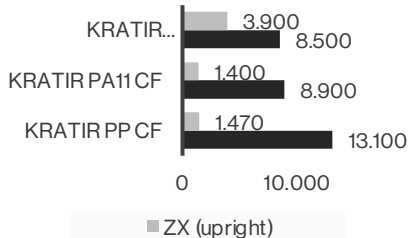
Corentin Fromont
Cosmyx

APPLICATIONS

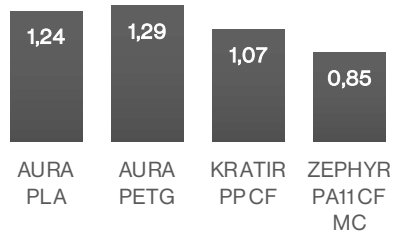


- Applications where a combination of lightweight, very strong and high-speed printing is needed
- Drones: more payload, faster & further reach
- Automotive (racing)
- Replacing parts made from 100% infill PLA to 15% infill PP CF

MODULUS COMPARISON [MPA]



DENSITY [G/CM³]



AVAILABLE IN
BLACK

AVAILABLE IN
DIFFERENT SPOOL WEIGHTS

Tectonic^{3D}

Kratir PETG CF



BASE MATERIAL FEATURES



Co-polyester



Compounded with "special" carbon fiber for high stiffness (8800 Mpa in XZ direction)



High strength



Great surface finish



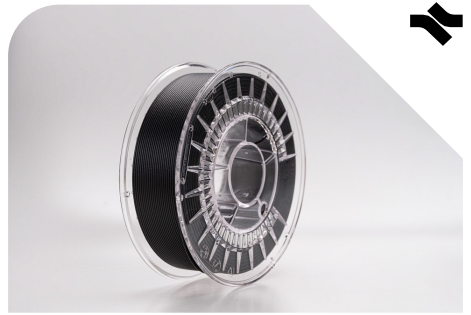
Excellent melt strength



Recyclable



Produced in the Netherlands



PRINTING PERFORMANCE



Available in 1.75mm and 2.85mm diameter

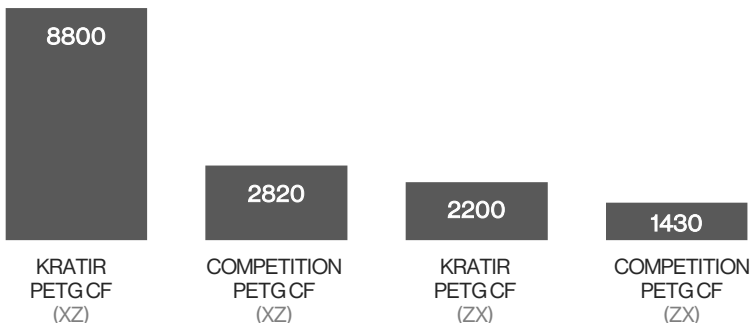


Easy printing

APPLICATIONS

→ Applications where stiffness at elevated temperatures (up to 75 °C) is needed.

Tensile Modulus ISO 527 Type 1BA in MPA



AVAILABLE IN
BLACK

AVAILABLE IN
DIFFERENT SPOOL WEIGHTS

Tectonic^{3D}

Kratir PA6/66 CF



BASE MATERIAL FEATURES



Compounded with “special” carbon fiber for high stiffness (8500 Mpa)



Lightweight



Carbon loading less than 10%



High interlayer strength



High temperature resistance (HDT under load 1.8Mpa 153°C)



First choice when start printing in engineering materials



Easy printing



Excellent surface finish



Low warping (especially compared to unfilled PA)

PRINTING PERFORMANCE



Available in 1.75mm and 2.85mm diameter



High speed printing: 16mm³/s (150mm/s)

APPLICATIONS



- Applications where durable and stiff parts with good mechanical properties are needed
- Automotive (under the hood applications)
- High performing functional parts



AVAILABLE IN
BLACK

AVAILABLE IN
DIFFERENT SPOOL WEIGHTS

Tectonic^{3D}

Kratir PA11 CF



BASE MATERIAL FEATURES



High temperature resistance
(HDT under load 1.8 Mpa 180 °C)



Excellent chemical resistance
(including acids, bases and salts)



Carbon fiber for high stiffness



Very low moisture uptake,
resulting in excellent dimension
stability



97% European sourced bio-
based material (castor oil)



Outperforming PA12 in terms
of impact (double at -30 °C
notched charpy)



>15% recycled content

PRINTING PERFORMANCE



Low moisture uptake for trouble
free printing



Extremely ductile in Z-direction

APPLICATIONS



→ Where performance and sustainability
is needed.

→ Airducts for defense vehicles

HDT (1.80 MPA) [°C]

180



KRA TIR PA11 CF

153



KRA TIR PA6/66 CF

MOISTURE ABSORPTION [%]

0,8



KRATIR PA11 CF

2,8



KRATIR PA6/66 CF

VOICE OF CUSTOMER

"KRATIR PA11CF enabled the possibility of producing large parts for specific engineering applications. Thanks to the consistency of the filament, the production is reliable and repeatable"

Riku Hietarinta
MiniFactory

AVAILABLE IN
BLACK

AVAILABLE IN
DIFFERENT SPOOL WEIGHTS

Tectonic^{3D}

Kratir PET CF



BASE MATERIAL FEATURES



Carbon fiber for high stiffness



Excellent dimension stability



Good tribological properties (wear and friction) compared to PA



Outstanding thermal properties (HDT under load 1.8 Mpa 204°C) & melting temperature 250°C



Density 1.40 g/cm³



PRINTING PERFORMANCE



Available in 1.75mm & 2.85mm diameter



High speed printing: 16mm³/s (150mm/s) especially compared to competition



Chamber: recommended 80 °C (50-90 °C)



Drying is very important for this grade: 3-4 hours at 120-140°C or 8-12 hours at 80 °C

APPLICATIONS



- Applications where a combination of high temperature and dimension stability is needed
- Industrial, conveyers, automotive, wide range of applications

Mechanical Properties	Method	Units	Printing 50m m/s	Printing 150mm/s
Tensile Modulus	ISO 527 Type 18A	MPa	9.600	10.600
Tensile strength at yield	ISO 527 Type 18A	MPa	No yield	No yield
Tensile strength at break	ISO 527 Type 18A	MPa	146	115
Elongation at yield	ISO 527 Type 18A	%	No yield	No yield
Elongation at break	ISO 527 Type 18A	%	2.8	1.0

AVAILABLE IN
BLACK

AVAILABLE IN
DIFFERENT SPOOL WEIGHTS

Tectonic^{3D}

Kratir rPPS CF



BASE MATERIAL FEATURES



Flame retardant VO at 0.8mm



High temperature resistant
(HDT under load 1.80 Mpa
260°C)



Very low moisture uptake



Metal sound



25% fibers and polymer
recycled content



High strength



Metal replacement -
eliminating corrosion



UV resistant

PRINTING PERFORMANCE



Available in 1.75mm and
2.85mm diameter



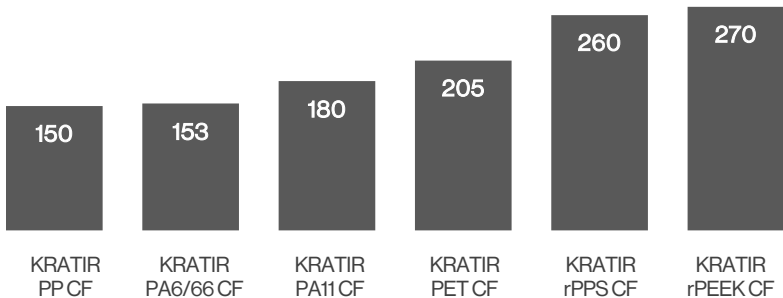
Recommended nozzle
temp.: 340 °C (325 °C - 345 °C)

APPLICATIONS



- Outdoor
- Structural parts where you need flame retardancy, heat resistance and dimension stability
- Electronics, Automotive

Temp. of deflection under load (1,80 Mpa)



AVAILABLE IN
BLACK

AVAILABLE IN
DIFFERENT SPOOL WEIGHTS

Tectonic^{3D}

Zephyr PA11CF MC



BASE MATERIAL FEATURES



New foaming technology to get extreme lightweight (0,85 g/cm³)



Excellent chemical resistance (including acids, bases and salts)



Carbon fiber for high stiffness



Very low moisture uptake, resulting in excellent dimension stability



97% European sourced bio-based material (castor oil)

PRINTING PERFORMANCE



Available in 1.75mm & 2.85mm diameter



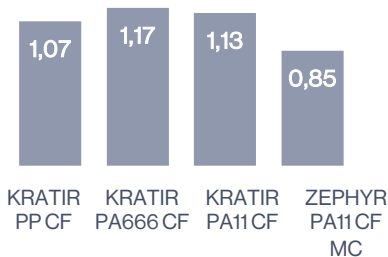
Can be printed in ambient conditions

APPLICATIONS

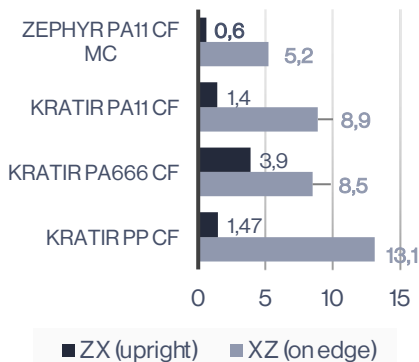


- Applications where a combination of extreme lightweight and a reasonable stiffness is needed
- Aerial, ground & aquatic drones
- Autonomous vehicles

DENSITY ISO 1183-1 (LIGHTWEIGHT) [G/CM³]



TENSILE MODULUS [GPA]



AVAILABLE IN
BLACK

AVAILABLE IN
DIFFERENT SPOOL WEIGHTS

Tectonic^{3D}

Anasa TPC 80A & 95A



BASE MATERIAL FEATURES



40% bio-based -castor oil-
(reduced carbon footprint) &
recyclable



Broadest operating
temperature range from -45
°C to +130 °C



Shore hardness of A 80
(shore D 35) & A 95 (Shore D
45) &



Superior touch and feel



This material offers better
resistance to warpage and
fatigue (compared to TPU)



Better protection against UV,
chemicals and oil exposure
(compared to TPU)



Excellent compression set



Base material is food contact
& skin approved



Not easy for fungi to attach
(compared to TPU)



Can be 100% recycled

PRINTING PERFORMANCE



Available in 1.75mm & 2.85mm
diameter



Can be printed in ambient
conditions

APPLICATIONS



- Outdoor Sports
- Wearable Straps
- Oil & Gas
- Lawn & Garden
- Appliances
- Mudflaps Automotive



AVAILABLE IN
A VARIETY OF COLOURS

AVAILABLE IN
DIFFERENT SPOOL WEIGHTS

Tectonic^{3D} Atar PPO



BASE MATERIAL FEATURES



Non-brominated, non-chlorinated flame-retardant unfilled compound



Flame retardant V0 at 1.5mm (UL94)



Low smoke generation upon burning



Low toxicity



Heat stabilized and impact modified



Very low specific gravity



Enhanced resistance to melting and dripping



Base material meets the requirements of FAR 25.853, EN45545-1 R22 and R23 HL1-2 for railway applications



Extremely low moisture uptake

PRINTING PERFORMANCE



Available in 1.75mm



Chamber temperature of 135°C needed

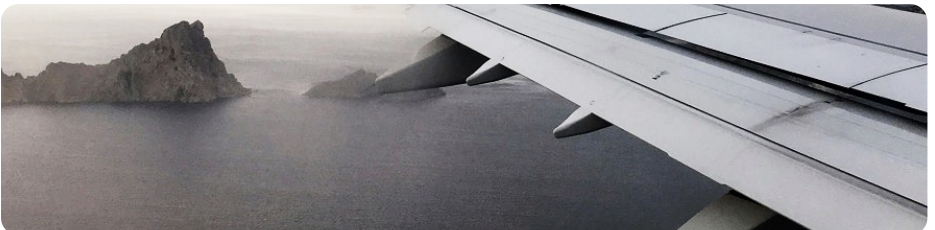


Please involve us in the testing setup

APPLICATIONS



- Aerospace
- Electronic and electrical
- Railway



AVAILABLE IN
BLACK

AVAILABLE IN
DIFFERENT SPOOL WEIGHTS

Tectonic^{3D}

Pyra PC/ABS FR



BASE MATERIAL FEATURES



Non-brominated, non-chlorinated flame-retardant unfilled compound



Complies with DIN VDE 0472/part 815 as halogen-free



Flame retardant V0 at 1.5mm (UL94)



Base material meets the requirements for railway applications R22 and R23 according to EN45545-2 and applications in buses according to R118.



Glow wire flammability: 960°C at 1.0 mm



Glow wire ignition temperature: 700°C at 1.5 mm



Vicat 104 °C

PRINTING PERFORMANCE



Available in 1.75mm & 2.85mm



Chamber temperature recommended 90°C



Drying 3-4 hours at 80-90°C

APPLICATIONS



- Railway applications
- Parts in buses
- Electric & electronic applications.



AVAILABLE IN
BLACK

AVAILABLE IN
DIFFERENT SPOOL WEIGHTS

Tectonic^{3D}

Other FR grades

VULCAN PEI 9085

- Flame retardant V0 at 1.5mm (UL94)
- Base material meets the requirements of FAR 25.853, OSU 55/55 & EN45545 R6-HL3
- Low smoke & toxicity

VULCAN PEI 1010

- Flame retardant V0 at 1.5mm (UL94)
- Natural base material meets the requirements of FAR 25.853, IEC 61249-2-21, IPC 4101E & JEDEC JS709B
- Low smoke & toxicity

VULCAN PEKK-A

- Flame retardant V0 at 0.8mm (UL94)
- Base material meets the requirements of FAR 25.853 and EN45545 R1 HL2
- Low smoke & toxicity
- Very high Z-strength
- Available in 1,75mm

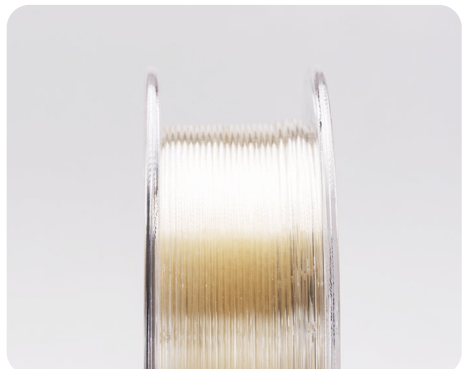
AVAILABLE IN
NATURAL



VULCAN TPI

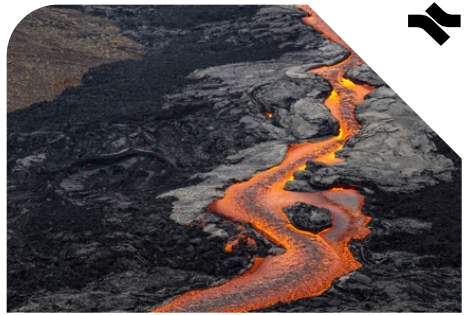
- Inherently flame retardant
- Highest Z-strength in the market
- Base material meets the requirements of EN45545 R22/R23 HL3
- Low smoke & toxicity
- Easy printing polyimide

ON DEMAND: PPSU AND PEKK-SC



AVAILABLE IN
DIFFERENT SPOOL WEIGHTS

Tectonic^{3D} Proteos & Lava



PROTEOS HTS

- Soluble support for high temperature materials like VULCAN 1010, Vulcan PEI 9085, (r)PEEK CF, PPSU
- Dissolvable in ECO Solvent LAVA
- Vicat temperature 204°C
- Filament diameter: 1.75mm

OTHER SUPPORT MATERIALS

- PVA - support for PLA, ABS and ASA
- Breakaway (HIPS) support - can be dissolved with Tectonic3D Lava. Support for PETG, PC/ABS, ABS, ASA, PET CF

LAVA



- Remover for PROTEOS
- Hazard-free solution
- ECO conscious choice (re-useable) for removal process
- Free from harmful chemicals, uncompromising performance
- Works best with ultra sonic waves at an elevated removal temperature (up to 45 °C)
- Ready to use
- Time: depends on geometry (it general takes longer than non-eco solutions)



AVAILABLE IN
DIFFERENT SPOOL WEIGHTS



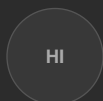
Tectonic^{3D}

Engineering Filaments for Professionals

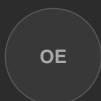
CONTACT

tectonic3d.com
info@tectonic3d.com

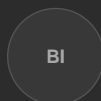
For technical support and material selection,
please reach out to your regional Tectonic 3D representative.



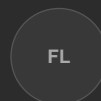
HIGH
PERFORMANCE



OEM
APPROVED



BIO-BASED
OPTIONS



FLAME
RETARDANT

DISTRIBUTORE PER L'ITALIA

3DTIME.IT | Tel. **+39 (0)59 776377** | **info@3dtime.it**
