

FibeCycle

Creating High-Performance Circular Materials

We believe materials tell stories
We believe waste can be reborn with purpose
We believe creation deserves a sustainable foundation
ecoFRP is our answer



Sustainability Pillars

Our sustainability pillars guide everything we create, reducing waste, lowering emissions, and enabling circular manufacturing.



WASTE
REDUCTION



LOW-ENERGY
PROCESS



CO2 EMISSION
REDUCTIONS



LOW CARBON
FOOTPRINT



RECYCLABLE
MATERIALS



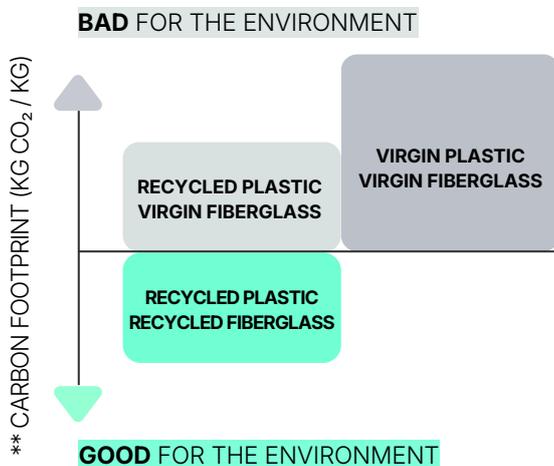
CIRCULAR
ECONOMY

The FibeCycle Material Platform (ecoFRP)

Don't just say "made with recycled content." **Say something real:**

every kilogram of your product reduces an estimated 1.5–1.7 kg of CO₂

ecoFRP is built on ISO-aligned* GHG methodology, providing the data manufacturers need to credibly report and reduce Scope 3 emissions.

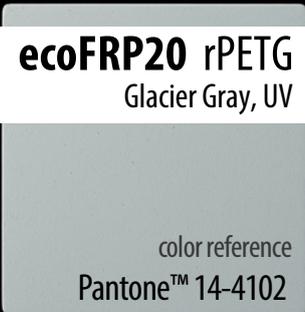


* Based on preliminary LCA data; full validation expected early 2026

** Visual representation based on relative carbon-footprint ranges

ecoFRPTM

eco-fiber Reinforced Plastic



High-Quality Eco-Composite for Advanced 3D Printing

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MATERIAL DESCRIPTION

ecoFRP20TM rPETG – Glacier Gray

High-Performance Recycled Composite for Large-Format 3D Printing



WHAT IT IS

ecoFRP20 is a structural recycled composite engineered for pellet-based 3D printing. Made from recycled PETG + 20% ecoFibres (recycled fiberglass), it delivers high stiffness, strength, and dimensional stability without sacrificing printability.

With >90% recycled content, it is the lowest carbon-footprint composite in its class, enables manufacturers to print large, durable products while reducing CO₂ emissions.

APPLICATIONS

ecoFRP20 is ideal for structural, stiff, design-grade parts such as furniture, architectural components, low-temperature tooling, and large-format printed objects that require high stability and a premium recycled aesthetic.

COLOR – Glacier Gray

A refined neutral gray developed for LFAM, engineered to deliver:

- A clean, modern design aesthetic
- Consistent surface finish across large prints
- Excellent compatibility with pigments for custom color blends
- Color reference Pantone™ 14-4102



MATERIAL DESCRIPTION

ecoFRP20TM rPETG – Glacier Gray

High-Performance Recycled Composite for Large-Format 3D Printing

DRYING CONDITIONS

Dryer Type: Desiccant dryer (recommended)

Temperature: 65°C (150°F). Do not exceed – pellets may soften

Duration: 4–6 hours

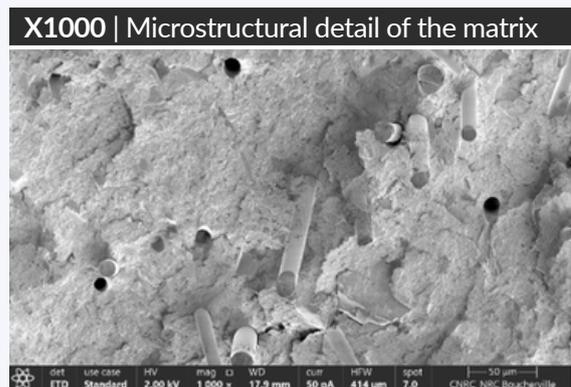
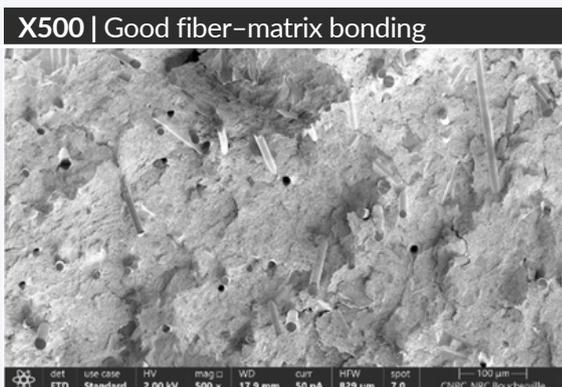
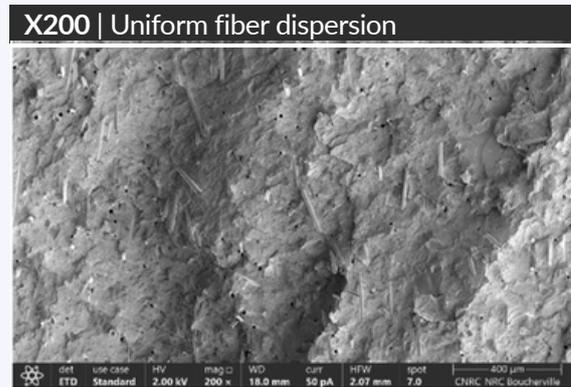
Target Moisture: < 0.04%

Air Dew Point: –30°C to –40°C (–20°F to –40°F)

MORPHOLOGY AND MICROSTRUCTURE (SEM)

Pellet Size , approximately ≈3 mm.

Scanning Electron Microscopy was performed on fracture surfaces from impact-tested, injection-molded specimens of ecoFRP20TM rPETG – Glacier Gray.





TECHNICAL DATA SHEET- TDS
ecoFRP20TM rPETG – Glacier Gray

All results reflect injection-molded test specimens (23 °C / 50% RH conditioning for 40 h). 3D-printed parts may exhibit slightly different performance due to printing parameters and layer structure

PROPERTY	VALUE <i>SD -Standard Deviation</i>	TEST METHOD
Tensile Strength at Break Standard deviation (SD)	39.25 MPa (SD 2.09)	ASTM D638 250 kN, 5mm/min 50 mm Extensio clip on GL
Tensile Modulus Standard deviation (SD)	2649 MPa (SD 247)	
Elongation at Break Standard deviation (SD)	5.62% (SD 0.84)	
Flexural Strength Standard deviation (SD)	65.3 MPa (SD 0.7)	ASTM D790 5 kN, 48 mm Span 1.3 mm/min
Flexural Modulus Standard deviation (SD)	2566 MPa (SD 34.5)	
Unnotched Izod Impact Standard deviation (SD)	12.3 kJ/m² (SD 2.1)	ASTM D256 Hummer 2 pi*lb
HDT @ 0.45 MPa Standard deviation (SD)	64.4°C (SD 0.2)	ASTM D648 at a pressure of 0.45 MPa
MFR (265°C / 2.16 kg) Standard deviation (SD)	26.85 g/10 min (SD 2.06)	ASTM D1238, At 265 °C, 2.16 kg Load 3 min pre-heat

Data sheet PDF here

