BIOCOMPOSITE

Biocomposite is derived from a biological or natural source

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ANPOLY
Advanced Natural Polymer

Re:ancel Biocomposite

Sustaining the Future with Nanocellulose Biocomposite Innovation

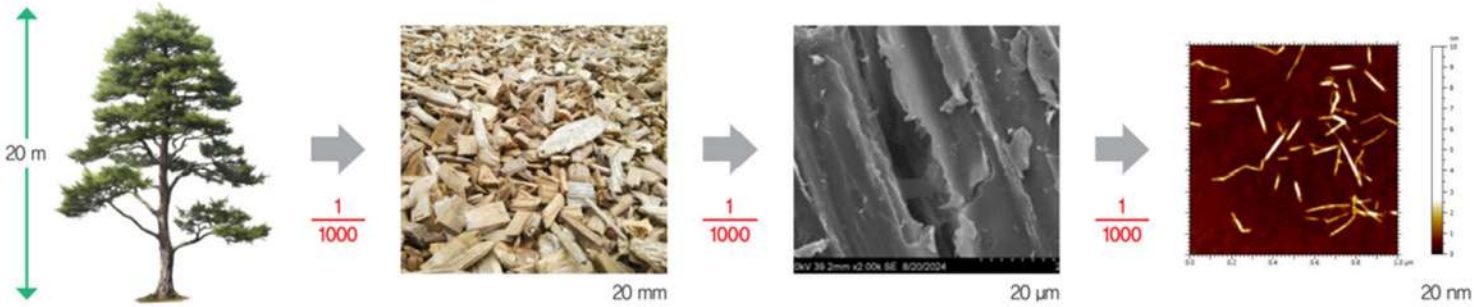
SUSTAINABLE DEVELOPMENT GOALS

Re:ancel Biocomposite

ANPOLY
Advanced Natural Polymer

ANPOLY is an advanced materials company dedicated to developing and commercializing eco-friendly, high-performance materials based on plant-derived nanocellulose. Our eco-friendly biocomposites, made from nanocellulose sourced from plants, represent a new generation of sustainable materials that combine with existing composites to enhance mechanical strength, physical properties, and environmental performance. Through the development of innovative natural fiber composites for a sustainable future, ANPOLY is redefining the paradigm of the eco-friendly materials industry.

What is CNF?



Tree | Wood Chips | Pulp | Nanocellulose

CNF(Cellulose Nanofiber or Nanocellulose) is an eco-friendly fibrous nanomaterial derived from cellulose obtained from wood or plants. Although it weighs only one-fifth as much as steel, it is more than five times stronger, offering exceptional strength, transparency, biodegradability, and thermal stability. Recognized as a next-generation sustainable material, CNF is at the forefront of advanced material innovation. ANPOLY possesses proprietary technology to produce nanocellulose from wood pulp, rice husks, and coffee grounds, and applies it to develop and commercialize biocomposites, ECM materials, battery binders, and separators.

Biocomposites

ANPOLY Biocomposites represent a new class of eco-friendly, high-performance materials engineered from plant-derived nanocellulose and other natural ingredients combined with advanced polymer matrices. Designed to replace petroleum-based plastics, these biocomposites contribute to carbon reduction and environmental sustainability, while achieving outstanding mechanical strength, light weight, and processability. Through proprietary surface modification and dispersion technologies, ANPOLY's natural biocomposites deliver superior reinforcement, durability, and stability, enabling versatile applications across packaging, automotive components, cosmetics, and the bioindustry.

Plastic Pellets | ANPOLY Biocomposites | Products containing natural composites

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Biocomposite Product Line

Re:ancel Bio-PP

Polypropylene (PP)-based biocomposite material

- Bio-based content: 30–50%
- Lightweight and impact-resistant
- Highly recyclable
- Tensile strength: 35–40 MPa
- Heat deflection temperature (HDT): 120–130 °C
- Carbon reduction effect: 30–35%

Applications:
Automobile interior materials, Packaging materials, Household goods

Re:ancel Bio-ABS

ABS-based recycling/biohybrid materials

- Recycled content: up to 70%
- Heat resistant dimensions improvement
- Stability and surface quality
- Tensile strength: 45-50 MPa
- Thermal deformation temperature: 95-105°C
- Carbon reduction effect: 40-45%

Applications:
Home appliances exterior, Furniture parts, Toys

Re:ancel Bio-PA

Nylon (PA)-based high-performance biocomposite materials

- Bio/recycling content: 25-40%
- For high strength structural parts
- Chemical resistance and abrasion resistance
- Tensile strength: 70-80 MPa
- Thermal deformation temperature: 180–210°C
- Carbon reduction effect: 25-30%

Applications:
Automobile parts, Functional device, High heat-resistant parts

Biocomposite Applicable Industries

ANPOLY's nanocellulose-based biocomposite is attracting attention as an innovative material in various industries based on its excellent mechanical performance and sustainable eco-friendly properties.

Automotive

Lightweight interior materials and parts

Eco-friendly composite dashboard

Noise and vibration reduction materials

Carbon emission reduction effect

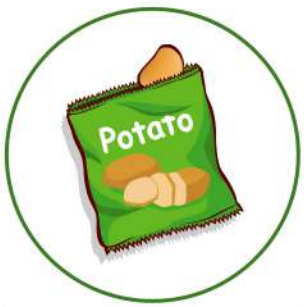
Packaging

Biodegradable food packaging

Utilize antimicrobial and antioxidant properties

Improved oxygen and moisture barrier

A substitute for disposable products



Construction

Eco-friendly insulation and reinforcement

Durability improving building material

Lightweight composite panel

Improved water resistance and fire resistance

Electric Device

Flexible display substrate

Battery separator material

Eco-friendly electronic component housing

Electromagnetic shielding material

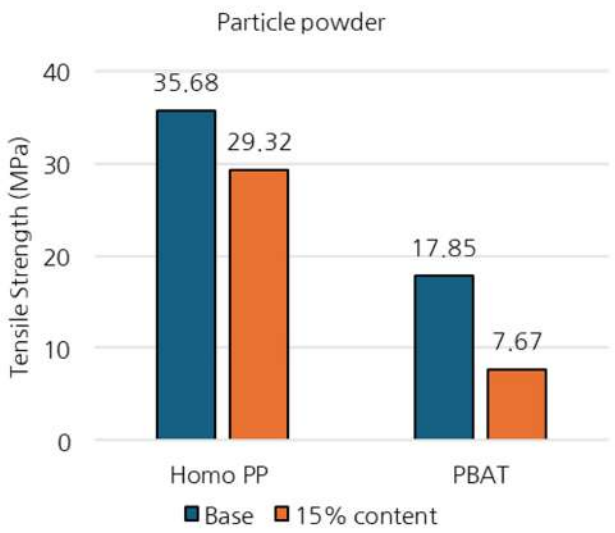
Re:ancel Biocomposite

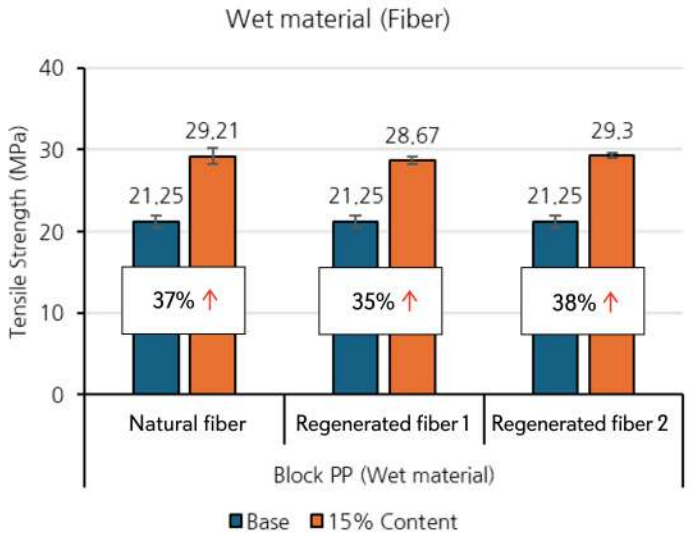
Fiber-shaped/Powder Biocomposite

Replacing existing plastics with natural composites with high biomass content and improved physical properties

→ Reduction of greenhouse gases and improvement of physical properties

Available in both fiber and powder types → **Increased strength for fiber-added composite materials**





ANPOLY Advanced Natural Polymer
www.anpolyinc.com
T. 82- 54-262-0222
E. info@anpolyinc.com