



sappi | Symbio

About Sappi

Sappi is a global diversified woodfibre group, focused on dissolving pulp, paper-based solutions and high quality functional biomaterials.

Manufacturing operations can be found on 3 continents with sales to more than 150 countries. We are using our global leadership position and significant investment in Research and Development in coated graphic papers, speciality packaging grades, dissolving pulp and biorefinery processes to respond to the growing global demand for high quality functional biomaterials.

As we focus on creating value for our shareholders, we take cognisance of our impact on this planet and stakeholders to ensure that all benefit in the long term. Sustainability is not an add-on, but an entrenched part of the way we manage our daily business activities, mitigate risk, leverage opportunities and plan for the future. We hold ourselves accountable to global sustainability best practice standards by transparently measuring, monitoring and communicating our economic, social and environmental performance.



Symbio sustainability

The way the world works is changing fundamentally. Development of a sustainable global economy, which permits improving purchasing power and living standards without exhaustion of resources for future generations, requires a fundamental change in attitude. These shifts mean that we are recalibrating our approach to issues of commerce, community and consumption, focusing more intensely on the use and regeneration of our natural resources.

On ecological grounds, preferred products should be those that are based on photosynthetic CO₂ fixation. The benefit of these sustainable resources is that they can be regrown within the foreseeable future, without negative side-effects on global biodiversity. Therefore, competitive products based on renewable resources need to be developed that have high quality, show excellent technical performance, and cause less harm to the environment than current products based on petrochemical materials.

Sappi Symbio is an eco-responsible solution combining advanced performance with a high energy efficiency and environmentally friendly products. Sappi Symbio is created with premium cellulose fibres sourced from renewable and well-managed forests. It is manufactured in an environmentally responsible production process and strives to replace fossil-based materials with sustainable materials derived from renewable resources.

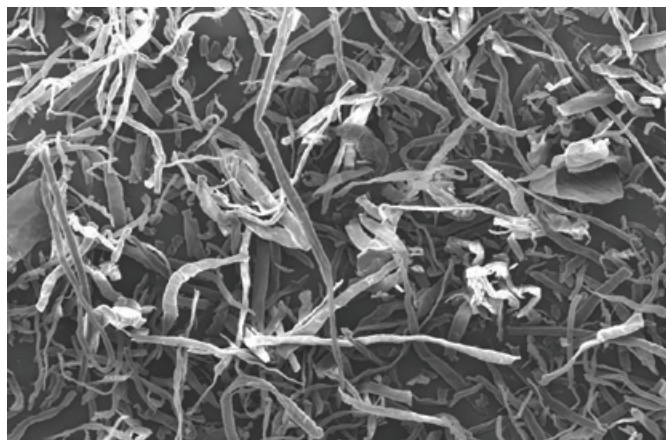
Cellulose fibres improve the life cycle analyses of your product and process, compared to fossil-based conventional materials, by considerably reducing the CO₂ footprint. Moreover, Sappi Symbio can be reused and recycled.

- **Less plastic**
- **Lower carbon footprint**
- **Lower energy consumption**
- **Reduced cycle times**
- **Lightweight solutions**

Sappi Biotech

Sappi Biotech is committed to investing resources to develop applications which progress the commercial realisation of the unique benefits which Sappi Symbio has to offer.

Project proposals are invited from customers and academic institutions who are committed to exploring and developing applications for this wonder material. Enquiries for samples or commercial quantities of Sappi Symbio should be directed to Sappi Biotech. Contact details are available on www.sappi.com/symbio



Symbio in touch with nature

Revolutionise your product with Sappi Symbio by combining the best qualities of wood and designability of plastic for optimised product properties.

Benefit from a more natural look, soft and warm touch, high rigidity and low density. Sappi Symbio is a new natural composite material combining high quality cellulose from wood and a polypropylene plastic material.

Sappi Symbio consists of premium cellulose fibres which are well dispersed in a polymer matrix and is delivered as granules. It can be injection-moulded and its application ranges across furniture, consumer electronics and automotive components.

The long-term vision is to provide bio-based materials fully derived from wood, that offer attractive alternatives to fossil-based plastics and composites. Take the next step. Enhance the properties of your product naturally, and let's shape the future of bio-based materials together.



What are the properties of Symbio

Key features of Sappi Symbio include:



Premium cellulose fibres



Cellulose contributes to a natural matt surface



Low density fibre with high stiffness properties



Warmth of wood



Natural sustainable material



Lower process temperatures



Fibres have low odour and low emissions



Improves heat deflection temperature and dimensional stability

Discover the nature of Symbio

Sappi Symbio is a new solution of premium cellulose fibres pre-dispersed in polypropylene, **enhancing the mechanical properties** of the materials, with **improved low density and good flowability**.

Sappi Symbio targets **injection-moulding** applications, although, depending on the formulation, it is also possible to use in **blow-moulding and extrusion processes**. It can be used in standard equipment.

Sappi Symbio is an **eco-responsible solution** containing cellulose fibres sourced from renewable wood. It provides consumer products with a **unique look and feel**, and with total freedom of design.



What benefits and advantages does Symbio offer?



Symbio products

- Symbio high Concentrate Masterbatch** - cellulose fibre stabilised concentrate especially developed for dilution with polypropylene matrixes. The concentrate is designed and engineered for optimal dispersion in a polymer matrix, contributing to excellent final properties. Due to its good balance between density, stiffness and impact resistance, it can be used for a variety of applications.

Validation grades with different percentages (%) of Symbio cellulose can be arranged via our compounders. Please get in touch with us at Symbio@sappi.com for more information.







**Enhancing composites
naturally**

sappi | **Symbio**

Sappi has 19 production facilities and 36 sales offices worldwide



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Contact details

Sappi Biotech
Symbio@sappi.com
www.sappi.com/symbio



For further product details
please scan the QR code above.