

LIGNIN-BASED BINDER TECHNOLOGY WITH MAXIMISED RENEWABLE CONTENT AND SUSTAINABILITY

LIGNIN-BASED BINDERS - A SUSTAINABLE GENERATION OF THERMOSET RESINS

Step into a new world of sustainable lignin-based binder technology. With UPM BioPiva™ lignin, in combination with our proprietary resin technology, you can significantly reduce your business' environmental footprint and move towards sustainability, in virtually all application areas where phenolic resins are used today.

MEET YOUR SUSTAINABILITY GOALS AND PROTECT OUR PLANET

Our UPM BioPiva™ lignin products and lignin-based binder technology help you meet your sustainability goals and decrease your business' impact on our planet, without compromising the performance.

CAPTURING CO₂ SUSTAINABLY INSTEAD OF USING FOSSIL RESOURCES

Carbon dioxide in the atmosphere is converted into organic matter by photosynthesis. It is stored either in biomass (forests or trees), or in products. Therefore, it is important to consider the efficiency of products throughout their lifecycle and design products and solutions to last and have a long service life.

Our innovative lignin binder technology enables up to 100% renewable carbon content in lignin-based resin while simultaneously reducing the consumption of formaldehyde in the resin by more than 60%. The product's carbon footprint is also significantly lower compared to fossil-based alternatives.



**UPM BioPiva™:
A SUSTAINABLE ALTERNATIVE**

The very core of UPM BioPiva™ lignin is sustainability. It originates from responsibly sourced wood and is made out of a side stream of a pulp mill. It can be used to reduce the dependence on fossil-based chemicals and materials. It is an environmentally sound alternative for petrochemicals, and it doesn't interfere or overlap with food chains. UPM BioPiva™ lignin products are not only environmentally sound, but also non-hazardous.

**LPF RESINS:
A VERSATILE SOLUTION**

LPF resins provide both versatility and sustainability. They are designed to qualify for all common work safety requirements. For example, they contain a low concentration of hazardous monomers (free formaldehyde and free phenol in the resin).

LPF resins and corresponding adhesive formulations are versatile and can be tailored based on the requirements of your existing manufacturing process and equipment. Our Technical service team will support you and provide you with years of experience and knowhow to ensure that your transition into more sustainable production is as easy as possible.

**HOW IT WORKS:
HIGH PERFORMANCE AS A
FACTOR IN SUSTAINABILITY**

The quality and high performance in the end use of the product is an important factor in sustainability throughout the product's service life. UPM BioPiva™ lignin based binders provide water resistance and meet the bonding requirements of exterior end uses. Our UPM BioPiva™ lignin products offer a sustainable binder solution for the phenolic resin industry and a variety of end uses, including plywood panels, particle boards, fiberboards, mineral wool, laminates and surface films.



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