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JRS Fibers for Life.

From Plant-Based Resources to High-Value Materials: The JRS Approach

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Tourcoing – Thursday, 8 October 2026

Who is JRS?

- Family-owned company founded in 1878 (JRS = Josef Rettenmaier & Söhne)
- 145+ years of experience
- More than 4,000 employees worldwide, more than 90 production and sales locations
- Renewable plant-based raw materials
- Global leader in cellulose-based functional materials

JRS turns renewable biomass into functional material solutions for multiple industries



Why is involved JRS in VALCELMAT?

VALCELMAT aims to create value from cellulosic resources and develop innovative bio-based materials.

JRS contributes through:

- Industrial expertise in cellulose processing
- Fibre modification technologies
- Powder engineering and particle design
- Hydrocolloids and alginates
- Scale-up capabilities
- Access to industrial markets

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VALCELMAT

Biomass → **Functionalization** → **Material Development** → **Industrial Applications**

Our Technology Platform

› Raw materials



Wood
Agricultural fibres
Recycled cellulose
Seaweed
Plant by-products

› Transformation technologies



Mechanical treatment
Fibre engineering
Micronization
Functionalization
Blending
Granulation

› Products



Cellulose fibres
Cellulose powders
Microfibres
Alginates
Hydrocolloids

What can JRS bring to the VALCELMAT Ecosystem?

Material Expertise

- Cellulose fibres
- Microcrystalline cellulose
- Ultrafine cellulose
- Cellulose gels
- Alginates

Industrialization

- Pilot to industrial scale
- Quality systems
- Supply chain

Market Access

- Packaging
- Construction
- Composites
- Coatings
- Filtration
- Consumer products







Example 1: Cellulose for Fiber-Reinforced Materials

Applications

- Thermoplastic composites
- Lightweight components
- Natural fibre reinforcement
- Improved mechanical performance
- Reduced fossil-based content

Product Use

Case 1: Interior door trim



Resin:	PP
Filler:	ARBOCEL® FD-600-30
Weight percent:	15 - 20 %
Processing method:	Injection

Case 2: B-column cover & trunk board



Resin:	PP
Filler:	ARBOCEL® C-320 or BWW-40
Weight percent:	20 - 30 %
Processing method:	Injection

Product Use

Case 1: Transmission belts



Resin:	EPDM
Filler:	ARBOCEL® FD-600-30
Parts:	30 - 50 phr
Processing method:	Calander

Case 2: Gaskets



Resin:	EPDM, NBR, SBR
Filler:	ARBOCEL® FIF-400
Parts:	12 - 25 phr
Processing method:	Calander

Advantages of ARBOCEL® in Thermoplastics and Thermosets

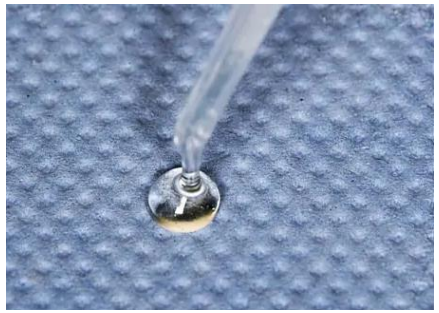
Natural appearance | Reduce fossil | Lightweight filler | Increase mechanical properties | Improve dimension stability



Example 2: Cellulose-Based Packaging Solutions

Applications

- Moulded fibre packaging
- Paper-based barrier structures
- Reinforcement additives
- Lightweight packaging
- Compostable packaging concepts





Product Use

Case 1: Coffee Capsules



Resin:	PBS/PLA
Filler:	ARBOCEL® B-600
Weight percent:	30 %
Processing method:	Injection

Case 2: Agriculture foil



Resin:	PBAT/PBS
Filler:	ARBOCEL® CW-630-PU
Weight percent:	5-10 %
Processing method:	Extrusion

Replacing plastics requires not only renewable raw materials but also functionality

Example 3: Alginates and Cellulose for Sustainable Packaging

Properties

- Film formation
- Rheology control
- Binding functionality
- Barrier improvement
- Biobased and renewable origin

Case 1: Coffee-capsule



Product type: Alginate

Application: Coating

Function: Oxygen barrier and plastic free capsules



Potential applications

- Coatings
- Paper packaging
- Biodegradable films
- Active packaging concepts

Paper







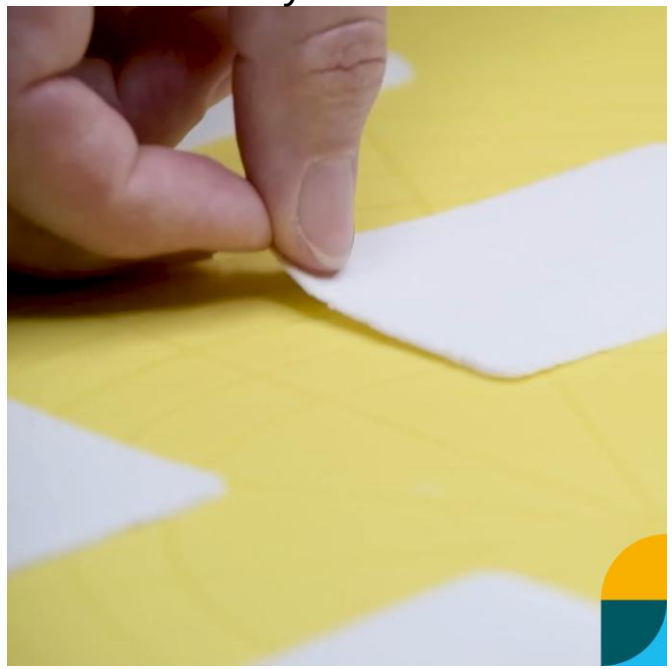
Beyond Packaging: Other High-Value Applications

- Construction materials
- Filtration
- Coatings
- Technical additives
- Bio-composites
- Consumer products
- Medical applications



Alginate based packaging by Polybridge

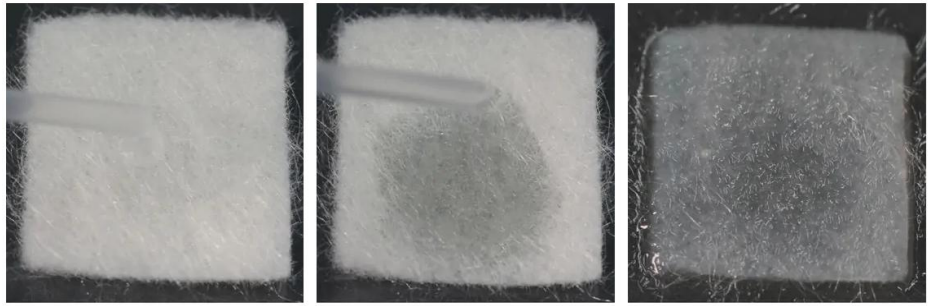
Shampoo card based on cellulose by JRS





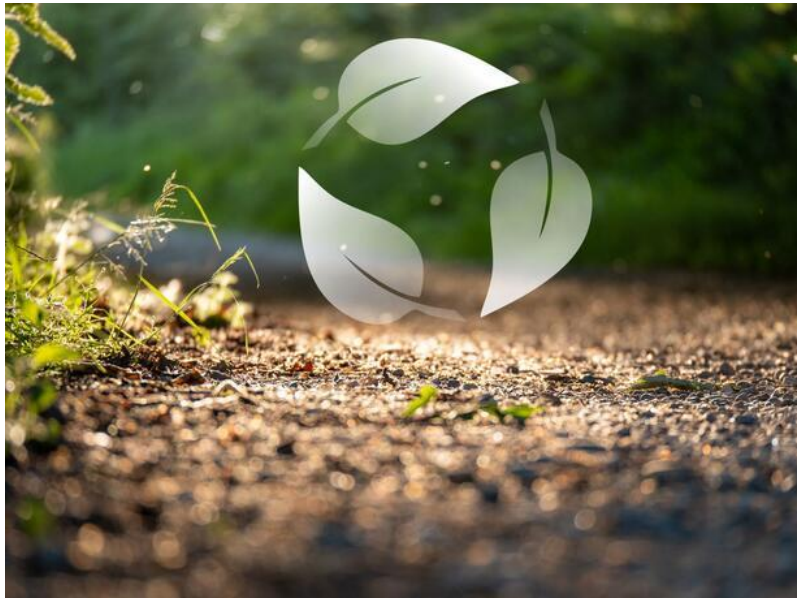
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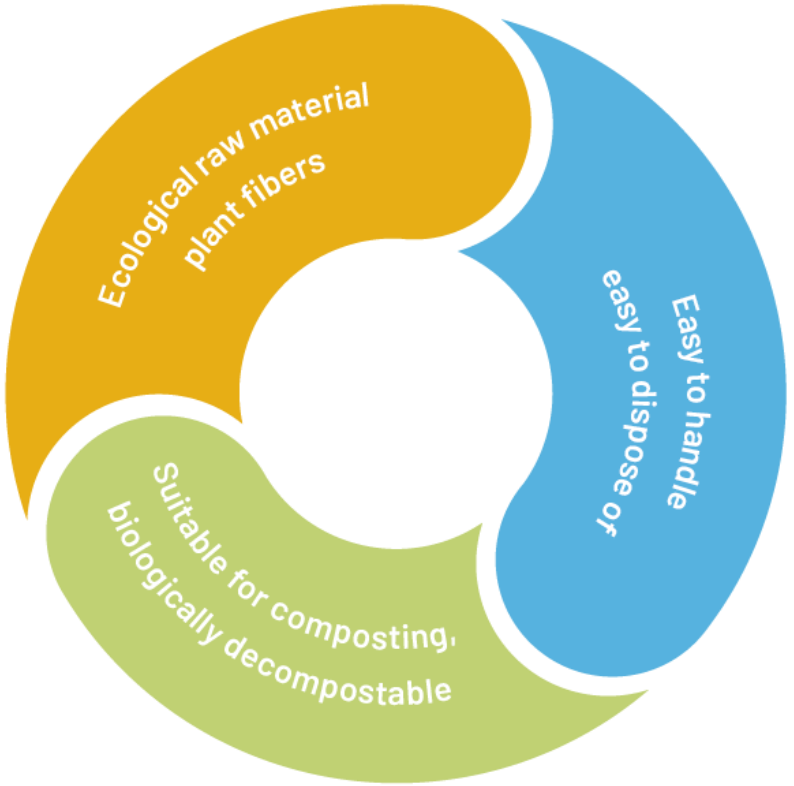
Wound care by JRS Medic



Sustainability Perspective

- Renewable raw materials
- Valorization of by-products
- Circular economy approach
- Reduction of fossil ressources
- Scalable industrial solutions





JRS is not only a material supplier but a long-term industrial partner for bio-based innovation

Key Takeaways

- Biomass valorization requires industrial implementation
- Cellulose and alginates offer versatile platforms for sustainable materials
- JRS provides expertise from raw material processing to market applications
- VALCELMAT creates opportunities to accelerate circular bio-based materials

For any inquiry or innovation project, please contact us at the following address:

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Or by phone: +33 (0)1 30 61 86 10

Visit our website https://www.jrsfrance.com/

And follow us on

You can also find our products at:

› Agrobiobase

› SpecialChem

› UL prospector



Thank You for YOUR Interest!

Fibers for Life.