

Boost your Ceramics!

With Plant-Based Solutions



based on
renewable resources



ARBOCEL®
LIGNOCEL®

Pore Formers and Rheology Additives
For the Ceramic Industry

Green Functionality for the Ceramic Industry



Green products with a long history

Since the 1960s functional cellulose and plant fibers have been used in multiple industrial applications.

With their natural properties they enable:

- improved product quality
- advanced functionality
- optimized production processes
- new, innovative product developments

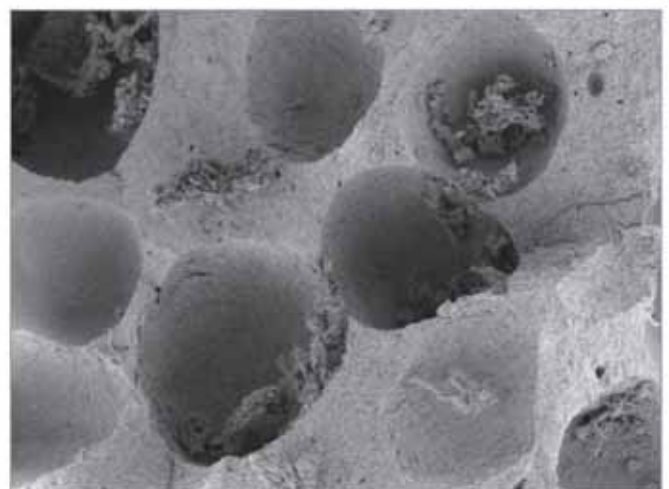
Advantages in ceramic applications

Natural cellulose and lignocellulose products are used as pore formers and to control moisture distribution.

- Control of pore volume, structure and size
- Short drying times
- Low reject rate
- Less cracks and fissures
- High flexibility of ceramic masses
- Rheology control
- High green body stability

Applications

- Technical ceramics
- Refractories
- Extruded ceramics
- Tiles and bricks
- ...



Natural Cellulose and Lignocellulose Products



Manufactured out of different raw materials

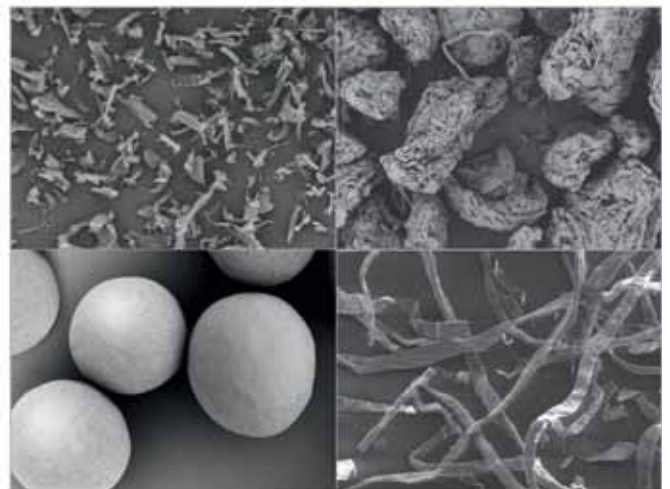
We use renewable and secondary raw materials for our extensive **ARBOCEL®** and **LIGNOCEL®** product range.

- Wood
- Cellulose
- Annual plants
- Recycled paper
- Algae (alginates)
- Citrus fruits (pectins)

Various sizes and structures

Based on the longtime experience in the manufacturing of cellulose and lignocellulose products, JRS has developed a large product portfolio. These products vary in manifold sizes and structures and are able to control the characteristics of the ceramic products.

- Fibers
- Cubic particles
- Granules
- Spheres
- Gels



Organic rheology additives

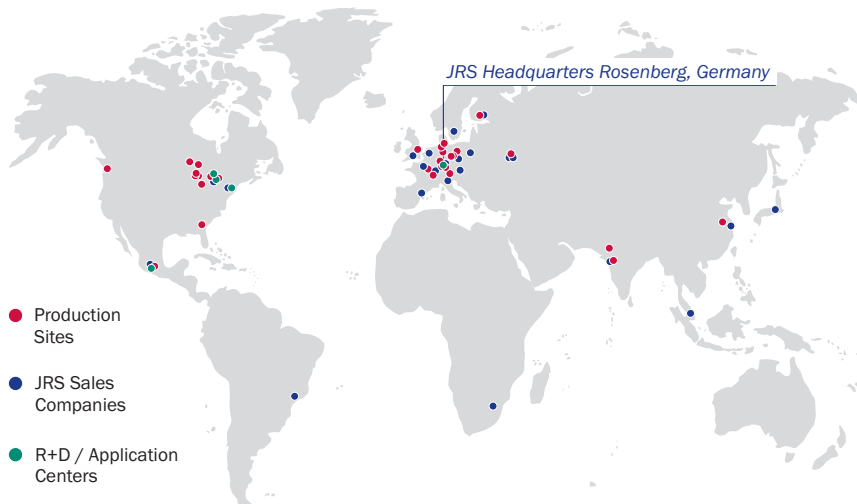
In the recent past, plant based hydrocolloids have been used as organic rheology additives (thickeners, stabilizers).

Our product portfolio:

- Hydroxypropyl methylcellulose (HPMC as Tylose alternative)
- Alginates
- Microcrystalline cellulose gels (MCG)
- Pectins

JRS – Your Strong Systems and Technology Partner

JRS – YOUR Qualified Partner – worldwide



Worldwide logistics and presence
 High availability and efficient, high-capacity production
 In-house research and development, application services
 Over 250 technical representatives around the world
 Decades of experience and comprehensive application know-how
 Quality manufacturing according to ISO 9001

Our Innovation Network

CERAMIC APPLICATIONS

Components for high performance

Treffpunkt Keramik,
 Baden-Baden, Germany
 (ceramic-applications.com)



Advanced Ceramics,
 University Bremen, Germany
 (ceramics.uni-bremen.de)



Institute of Glass and Ceramics
 FAU Erlangen-Nürnberg, Germany
 (glass-ceramics.tf.fau.de/)



ENSCI,
 l'Ecole Nationale Supérieure de
 Céramique Industrielle,
 Limoges, France
 (www.ensil-ensci.unilim.fr)



SPCTS
 University of Limoges, France
 (www.unilim.fr/science-of-ceramic-
 processes-and-surface-treatments-
 spcts)