

# Carriers for Crop Protection, Plant Health and Fertilizer

### JRS fibers from nature...

JRS carriers are powders, fibers or granules made of different plant based raw material.

#### Raw materials:

- Corncob
- Hard or soft wood
- Cellulose based on wood or different plants

JRS carriers are fully biodegradable, non-GMO and can be registered to be allowed in organic farming and horticulture.

JRS carriers are suitable for liquid active substances, extracts or oils as well as fungi spores or bacterial based actives.

## REHOFIX® corncob granules

- Stable carrier for active ingredients, fungi spores or fertilizers
- High absorption of liquids 130 450 %
- High resistance to attrition
- Excellent flowability
- Low dust level
- Adequate for most application systems
- Big range of different fractions
   80 µm 3.500 µm
- High inner surface area
- Precise dosage possible







## ARBOCEL® cellulose fibers

- Big range of functional cellulose fibers, powdered cellulose, fine cellulose, micronized cellulose, cellulose granules
- Sprayable fibers of approx.. 30 μm (finest fibers for stable dispersions)
- Fluffy, long fibers of approx. 2.000 μm (longest fibers)
- Capillary effect allow good water uptake and high retention
- Fast drying for efficient production
- Biologically, chemically inert
- Highly pure and technical grades available

### VIVAPUR® MCC spheres

- Consist purely of microcrystalline cellulose
- Extremely robust
- Biologically, chemically inert
- Can be filled into capsules and compacted into tablets
- Tight particle size distribution
- Wide range of available particle sizes
- Insoluble in water
- High degree of sphericity
- Moisture and heat resistant

#### www.jrs.de

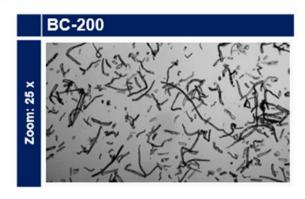
#### WORLDWIDE HEADQUARTERS

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## Carriers for Crop Protection, Plant Health and Fertilizer



# FILTRACEL® ESG Cellulose Carrier

- Silicified Cellulose fiber
- Unique adsorbent with enhanced adsorption and desorption properties
- Constant Water- and Oil Binding Capacity
- Huge BET Surface Area of approx. 30
   35 m²/g
- Carrier Application: Adsorbs Metal ions (cations) and polar substances
- Slurry Application: Selective Adsorbent for molecules like Methylene Blue

# ARBOCEL® UFC ultra-fine cellulose

- Finest carrier
- Oil absorption 1,6 g oil/1 g
- Water absorption 3 g water / 1 g
- Highly pure, white powder
- Particle size approx. 1,0 4,5 μm
- Dispersible in water, insoluble
- No settling
- Suited for transparent systems
- Sprayable
- Easily pumpable in dispersion until 20 % solid content
- Excellent water retention under pressure pulses or high temperature

# LIGNCOCEL® soft wood and hard wood fibers / granules

- Fibrous or cubic particles for specific dosing requirement
- Big outer surface for high adsorption capacity
- From sustainable resources (PEFCcertified)
- From domestic forestry
- Made of beech, spruce, oak or poplar





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## JRS Granules and Fibers (example types)

Type []= JRS Spec.		REHOFIX MK 100	ARBOCEL RC super fine	LIGNOCEL BK 40-90
Raw material		Corn Cobs	Softwood fibers	Soft wood granules
Particle size	mm	~ 0,08 - 0,12	~ 0,2 - 1,8	~ 1 - 2
Abrasion resistance	+/-	medium - good	Very good	good
Bulk density	g/l	320 - 420	Ø 273	170-230
Bulk Cone Height BCH	mm	21-26	24	26-35
BCH after addition of water	mm	Currently No data	38	28-37
BET surface area N <sub>2</sub> / 20^C	m²/g	2,3 – 3,5	2,4	2,8
pH-value		4,5 – 6,5	4,6	5,8 [4,5-6,5]
Residue moisture	%	8,7	9,6	4 -7
Water retention, Westinghouse	%	approx. 240 - 270	622	720

## JRS Celluloses (example types)

Type []= JRS Spec.		ARBOCEL BWW 40 C extra fine	FILTRACEL ESG 950	VIVAPUR MCC 101
Raw material		Cellulose fibers, granulated	Cellulose Fibers, Silica-treated	Micro-crystalline Cellulose
Particle size	mm	~ 0,15 - 0,45	~ 0,05 - 0,28	~ 0,065
Abrasion resistance	+/-	good	medium	good
Bulk density	g/l	Ø 332	170-290	260-310
Bulk Cone Height BCH	mm	21	30-40	16-22
BCH after addition of water	mm	57	36-43	18-23
BET surface area N <sub>2</sub> / 20^C	m²/g	2,3-2,7	28-34	2-3
pH-value		6,0	6 [5-7]	6,3 [5-7,5]
Residue moisture	%	6,3	5- 7	4-6 [≤7]
Water retention, Westinghouse	%	439	616	420

