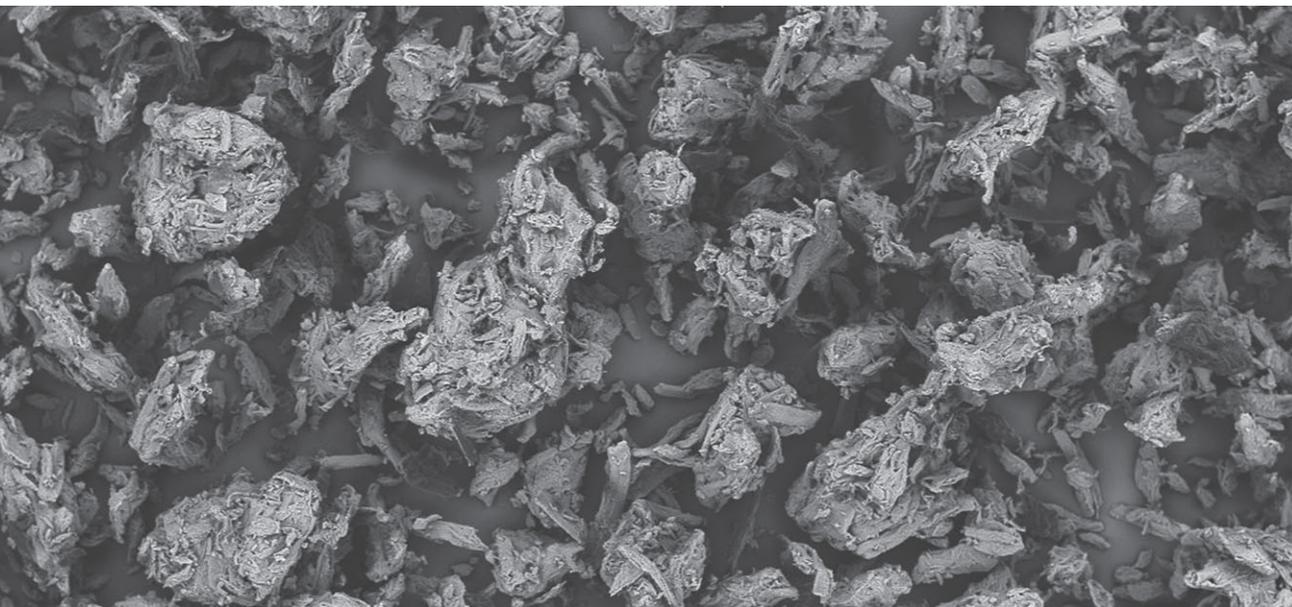


EMCOCEL®

Microcrystalline Cellulose



The Classic Premium MCC



EMCOCEL® – The Classic Premium MCC

Premium Quality MCC for Best-in-Class Performance in Direct Compression and Wet Granulation

EMCOCEL® MCC (Microcrystalline Cellulose) is an odorless, tasteless, white powder with a high degree of brightness, derived from highly purified wood pulp. With a wide range of chemical, technical, and economic benefits, MCC is one of the most widely used binder/filler excipients for tablet formulations. The **EMCOCEL®** line is JRS PHARMA's premium spray-dried MCC – with six grades available for common formulation needs. Decades of manufacturing high quality MCC in large volumes ensure high batch-to-batch consistency. In addition, Functionality Related Characteristics, such as bulk and tapped density, are analyzed and certified for all **EMCOCEL®** grades.

Benefits include

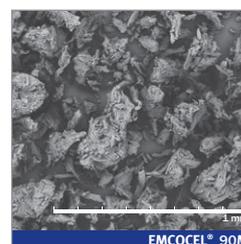
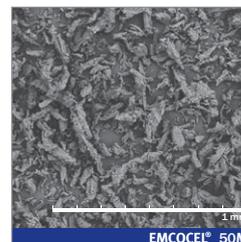
- High compactability
- Robust tablets with low friability
- High production yields
- Practically inert – compatible with most APIs
- Created from sustainable organic materials
- Contains no additives, impurities, or irradiated components
- Advanced carton packaging design for fast NIR identification (see pictures page 4)

Six Grades for Common Formulation Needs

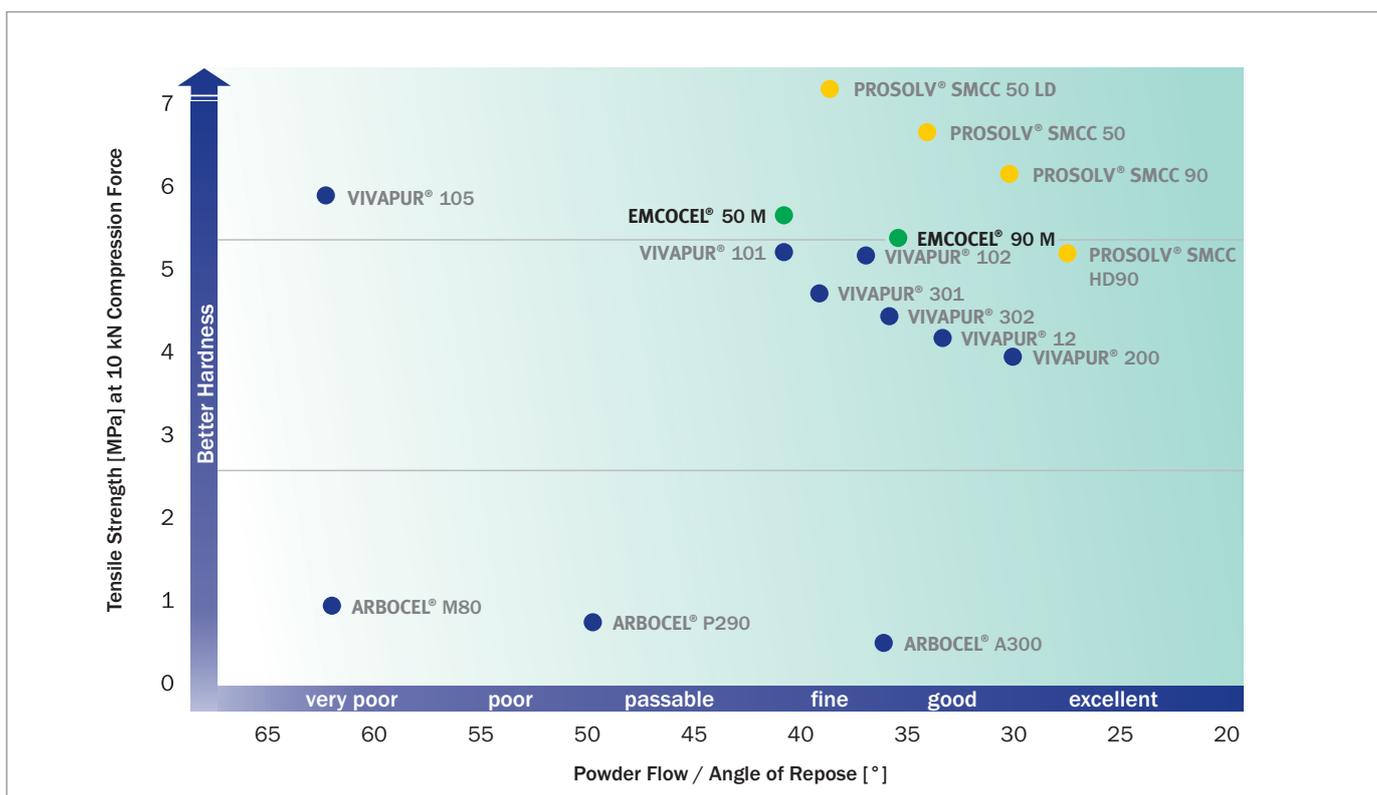
Grade	Average Particle Size by Laser Diffraction (µm)	Bulk Density (g/mL)	Main Application
EMCOCEL® 50 M	65	0.25 – 0.37	Fine standard MCC grade, especially suited for wet granulation, roller compaction and spheronization. Very high compactability.
EMCOCEL® 90 M	130	0.25 – 0.37	Medium size standard MCC grade, suited for the majority of directly compressible actives. Combines good flow and high compactability.
EMCOCEL® XLM90	130	0.25 – 0.37	Same quality to grade 90M, but very low moisture content (< 1.5 %) for processing water-sensitive actives.
EMCOCEL® HD90	130	0.38 – 0.50	Same quality to grade 90M, but increased bulk density and improved flow properties. Especially suited for high speed tableting and processing high density actives.
EMCOCEL® 90 M COARSE	170/175	0.25 – 0.37	Coarse, DC-grade MCC with excellent flow.
EMCOCEL® LP200	220	0.20 – 0.37	Coarse grade MCC, combines good compactability and high binding capacity with outstanding flow. Provides good content uniformity at low weight variation – even when used with low concentrations of fine actives.

Regulatory and Quality Assurance

- EXCiPACT™ certification in progress (Plant Microcellulose Weissenborn)
- Audit questionnaire according to the IPEC GMP Audit guideline for bulk pharmaceutical excipients (BPE)
- Conforms to Ph. Eur., NF, JP monograph requirements
- CEP, US and Chinese* Drug Master Files (DMFs) available
- QbD data and historical production data available
- Full documentation package and regulatory support available
- Elemental Impurity Information according to ICH Q3D Guideline
- TUP profile according to IPEC guideline available
- Tableting functionality regularly tested to ensure consistent quality and performance
- 100 % Plant Derived – no BSE / TSE risks
- Genetically Modified Organisms (GMO) Free
- Pesticide & Herbicide Free
- Halal Certified
- Kosher Certified
- Allergen free



*Chinese DMF, only for **EMCOCEL® 90 M Coarse**



The Global Excipient Maker

Logistics

- Regional manufacturing to minimize duty, currency conversion and freight costs
- Global sales network, local technical support
- Bar code labeling and vendor managed inventory possible
- Warehouses in line with global pharmaceutical standards
- Multiple state-of-art manufacturing sites around the world guarantee supply chain security and business continuity, offering risk mitigation

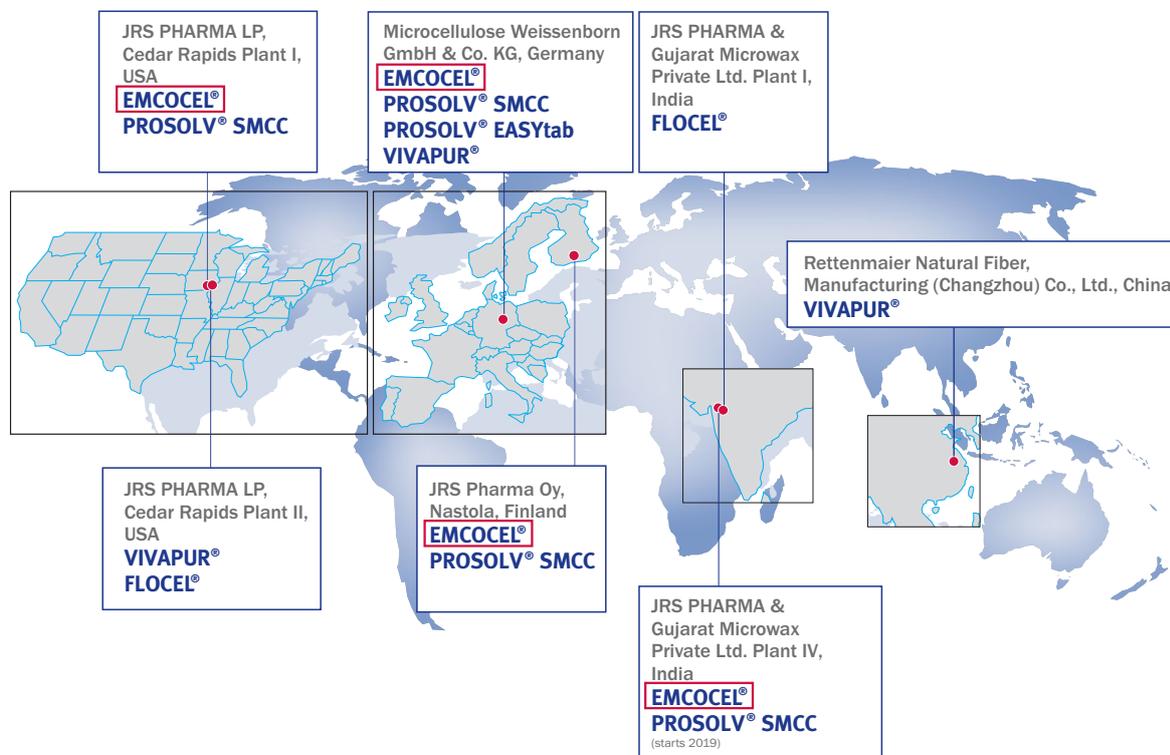
Packaging and Sample Size

All Types	Packaging Size	Pallet Size
Cartons	20 kg carton box with PE liner	400 kg US pallets, 320 kg EURO pallets
Paper Bags	20 kg paper bags with PE liner	400 kg US pallets, 320 kg Euro pallets
Supersacks and Drum Packaging	available upon request	

Sample size: 400 g and 2 kg



JRS PHARMA – The Global MCC Manufacturing Network



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