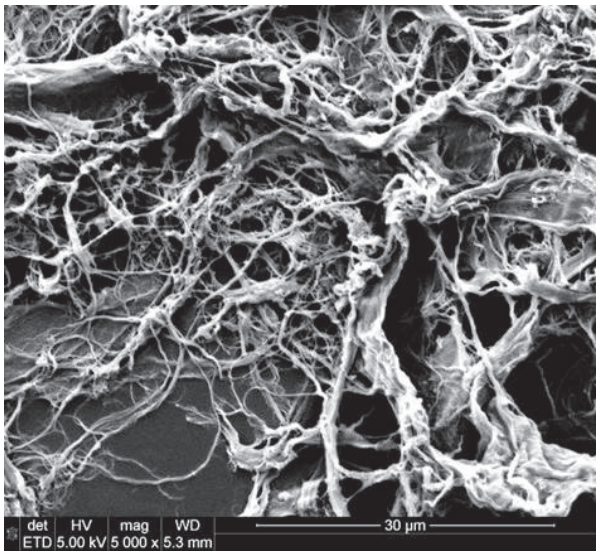
WEIDMANN FIBER TECHNOLOGY

NATIVE MICROFIBRILLATED CELLULOSE FOR WIDE RANGE OF APPLICATIONS: WMFC Q_ECO

The combination of high quality, locally sourced pulp and our unique, gentle defibrillation process produces a microfibrillated cellulose with a wide distribution of particle sizes. WMFC Q_eco is suited for applications that require microfibrillated cellulose but tolerate larger particle sizes with an excellent value proposition. Typical applications are filters, structural elements in paints and as strengthener in paper and board.



Scanning Electrone Microscope (SEM) image of WMFC

RAW MATERIAL

The raw material for WMFC Q_eco is bleached softwood pulp made of locally sourced, sustainably grown wood from EMAS and ISO 9001 certified suppliers. All pulps used are either ECF (elementary chlorine free) or TCF (total chlorine free) bleached.

RAW MATERIAL PROPERTIES

Parameter	Method	Unit	Property
Cellulose content	Internal	%	> 85
Hemicellulose content	Internal	%	> 5
Lignin content	Internal	%	< 1
DP	IEC 60450		800 - 1100
Ash	IEC 60641-2	%	0.1 - 0.5
pH	IEC 60641-2		5 - 8
Conductivity of aqueous extract	IEC 60641-2	mS/m	1.5 - 15

PROPERTIES OF WMFC Q_ECO

Manufactured using our unique, gentle defibrillation process, WMFC Q_eco provides a significant surface area and good rheological properties while showing a low water retention value, low ash content, neutral pH range and a wide particle size distribution. WMFC Q_eco combines the advantages of microfibrillated cellulose with economic processibility.

Parameter	Method	Unit	Property
Water retention value	Internal	%	not available yet
Ash content	IEC 60641-2	%	0.2 - 1.0
pH (hot extraction method)	IEC 60641-2		6.0 - 8.0
DP	IEC 60450		600 - 1000
Conductivity of aqueous extract	IEC 60641-2	mS/m	2 - 40
Viscosity @ 100 1/s	Internal	Pas	0.08 - 0.15
Viscosity @ 500 1/s	Internal	Pas	0.03 - 0.05
Viscosity @ 1000 1/s	Internal	Pas	0.02 - 0.03
Particle ratio ≤ 200 µm	TAPPI-T271	%	≥ 50
Particle ratio ≥ 500 µm	TAPPI-T271	%	≤ 6

For many applications, the viscosity at a certain shear rate is important to determine the rheological behavior of the product during manufacturing processes and application. In contrast to our WFC products, the dynamic viscosity of WMFC Q_eco can be measured. WMFC Q_eco shows good viscosity performance in combination with low torque forces.

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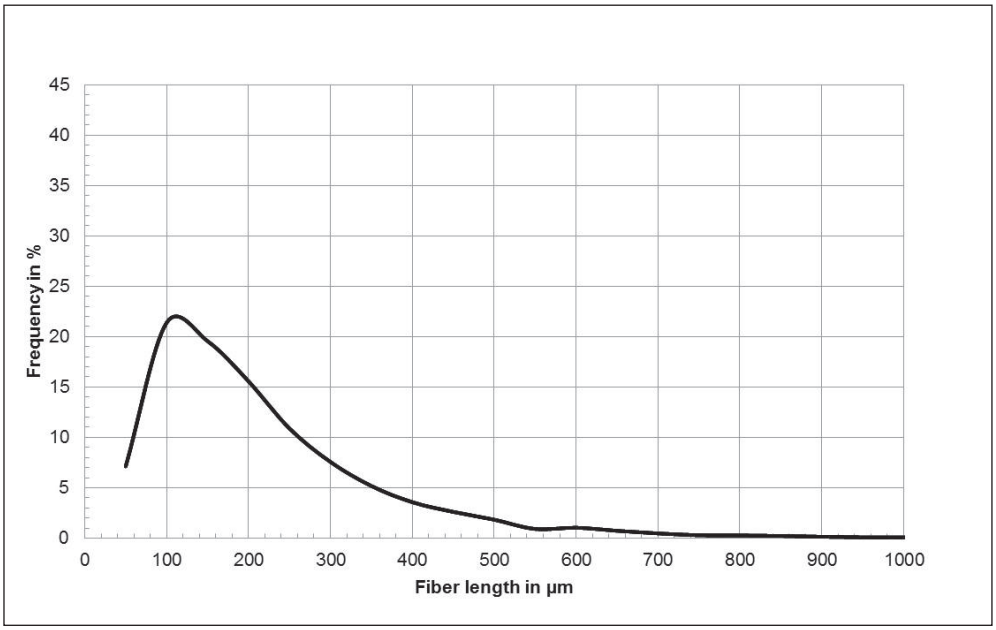
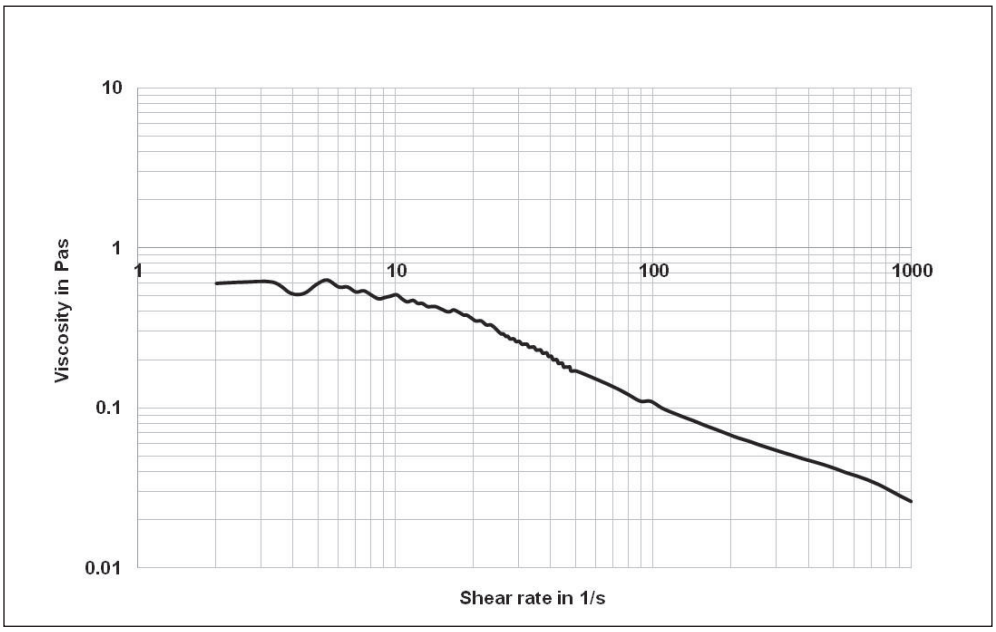


Average fiber length distribution of WMFC Q_eco



Viscosity of WMFC Q_eco

ADDITIONAL INFORMATION

WEIDMANN Microfibrillated Cellulose Q_eco is offered in a range of solid contents from 2 to 25 %. The durability of WMFC Q_eco at 10 °C is twelve weeks, at 25 °C six weeks. The durability can be extended by adding a biocide but may influence certain product properties. Please contact us for any special requirements.

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