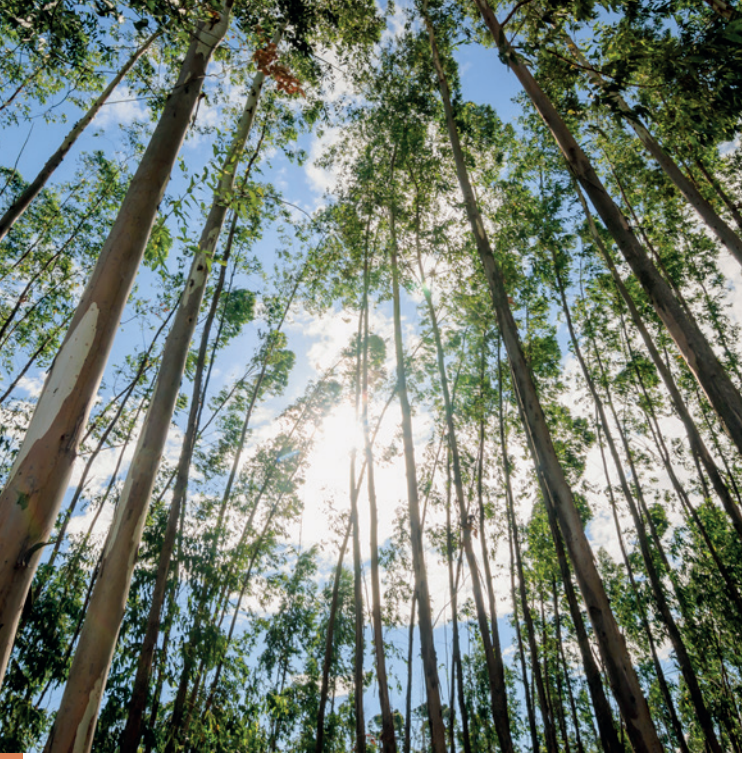


MINASOLVE® is an affiliate of MINAFIN® Group

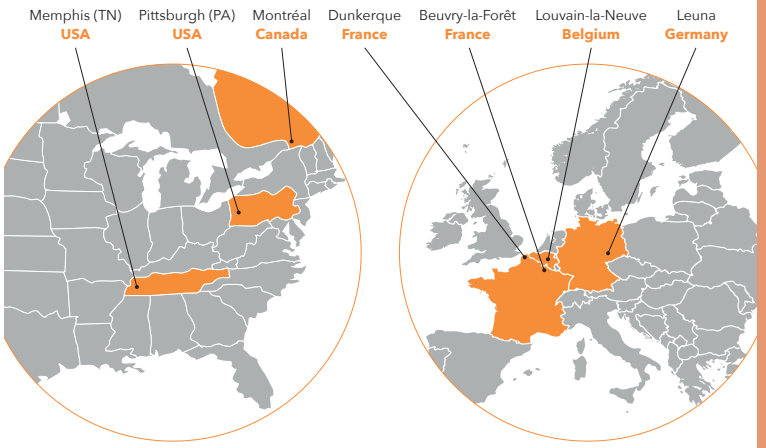
Created in 2004, The Minafin® Group is an expert in Health Chemistry, Green Chemistry and Challenging Chemistry. Activities include industrial subcontracting, development of chemical syntheses and industrial scale-up of custom-made processes as well as proprietary products with high added value for the pharmaceutical, cosmetics, agriculture and high-tech industries. Strong synergies exist between all business units: MINASOLVE, MINAKEM, PENNAKEM, PRESSURE CHEMICAL and MINASCENT.

Serving market leaders as well as emerging players we support our customers' efforts to improve the quality of life in the global community by:

- Improving our chemistry and operational excellence today
- Creating and innovating for tomorrow
- Driving our enterprises together to **go beyond expectations**

Specifications and Characteristics

	A-Sensofeel MFC
INCI	Cellulose, Glycerin, Water
CAS REG. N°	9004-34-6, 56-81-5, 7732-18-5
APPEARANCE	White to off-white powder
RECOMMENDED pH OF USE	4.0 ▸ 12.0
RECOMMENDED USE LEVEL	0.2 ▸ 4.0 %
NATURAL ORIGIN INDEX	1 (ISO 16128)
COSMOS APPROVED	✓
PALM-OIL FREE	✓
LISTED PRESERVATIVE-FREE	✓



300 M€ SALES
1050 EMPLOYEES
150 SCIENTISTS
7 PRODUCTION SITES

MINAFIN® GROUP

2024 02. V2.1

MAKE UP

A-SENSOFEEL MFC in MAKE UP APPLICATION

CREATE ATTRACTIVE COSMETICS IN A NATURAL WAY

COLOUR BOOSTER & PIGMENT DISPERSION AID

✓ LOOK
✓ TOUCH
✓ FEEL

Approved by ECOCERT RAW MATERIAL
COSMOS APPROVED

NATRUE APPROVED

PATENTED PATENTED PATENTED

in-cosmetics global Green Ingredient Award 2023 SILVER

MINASOLVE®
BIO-INGREDIENTS FOR YOUR APPLICATIONS

green solving attitude.

WWW.MINASOLVE.COM

A-Sensofeel MFC, from Minasolve

100% BIOBASED, CREATING ATTRACTIVE NATURAL COSMETICS WITH EXCELLENT LOOK, TOUCH AND FEEL.

Minasolve, in partnership with the Swiss cellulose specialist Weidmann, introduces the new **Sensofeel** product line based on Microfibrillated Cellulose (MFC, Figure 1).

A-Sensofeel MFC contains a dense, three-dimensional entangled network of micrometer-sized natural cellulose fibers (microfibrillated cellulose) produced by a mechanical process without the use of chemicals or enzymes. The cavities within the 3D fiber network are similar in size to oil droplets and pigment particles and therefore hold them in place (Figure 2). The formation of agglomerates during mixing is effectively prevented, thus **improving pigment dispersion and increasing the color intensity** of a formulation. The result is an **even distribution of pigment particles on the skin.**

Moreover, this fiber network strengthens the internal structure of the formulation, and when applied to the skin, immediately becomes flexible and forms a gentle film. **A-Sensofeel MFC** therefore **naturally improves the sensory properties of many formulations.**

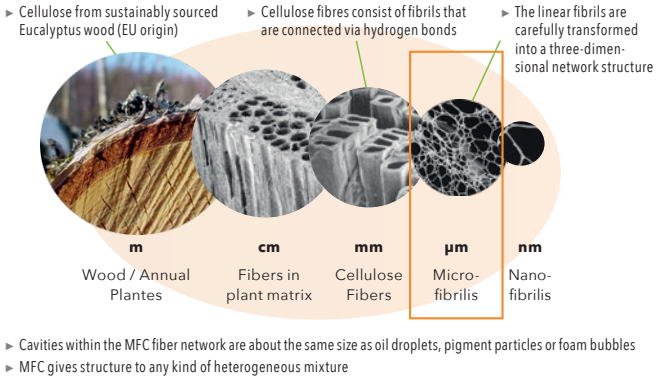
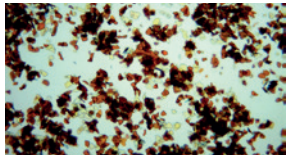


Figure 1

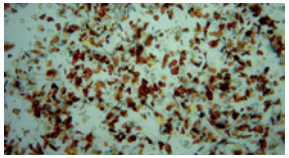
A-Sensofeel MFC is COSMOS approved and manufactured entirely in Europe. The pulp used as raw material for **A-Sensofeel MFC** comes from locally-sourced, sustainably-managed forests in Europe. It is environmentally friendly, readily biodegradable, and produced via a purely mechanical process without the use of chemicals or enzymes.

"Make-up is all about attraction"

A-Sensofeel MFC acts as a physical suspension aid for pigments.



1% of pigment in water



1% of **A-Sensofeel MFC** with 1% of pigment in water

Figure 2 Magnification 40x

A-Sensofeel MFC in eyeshadow application

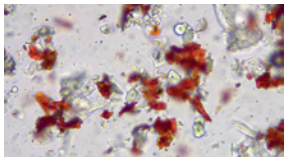
In an eyeshadow formulation (Table 1), the binder Magnesium stearate was replaced by **A-Sensofeel MFC**.

The appearance of the eyeshadow containing **A-Sensofeel MFC** was **brighter**, the colour was **more intense** and the surface became **glossier**. Upon application on skin, the formulation achieved a **more uniform and improved coverage.**

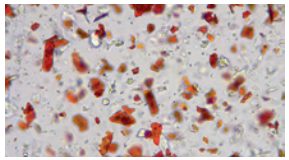
Eyeshadow formulation (Table 1)

Phase	Raw Materials	INCI	%	
			Placebo	With A-Sensofeel MFC
A	Talc	Talc	66.00	66.00
	Rice Powder	Oryza Sativa Powder	12.00	12.00
	Corn Starch	Zea Mays Starch	5.00	5.00
	Magnesium Stearate	Magnesium Stearate	2.00	-
	A-Sensofeel MFC	Cellulose, Glycerin, Water	-	2.00
	Cinnamon Girl pigment	Mica (CI 77019), Red Iron Oxide (CI 77491), Zinc Oxide (CI 77947), Titanium Dioxide (CI 77891)	15.00	15.00

Figure 3 shows the microscopic structure of the powder formulation after dispersion in the cosmetic solvent Pentylene Glycol.



10% of eyeshadow placebo (15% pigment) in A-Leen 5



10% of eyeshadow with **A-Sensofeel MFC** (15% pigment and 2 % A-Sensofeel MFC) in A-Leen 5

Figure 3 Magnification 40x

In the presence of **A-Sensofeel MFC**, the formation of agglomerates is reduced, which explains the superior performance of this product in comparison to the placebo.

A-Sensofeel MFC in lipstick application

Compared to the standard formulation (Table 2), the addition of 1% **A-Sensofeel MFC** provided **better skin coverage.** The lipstick formulated with MFC was also **easier and more pleasant to apply** and produced a **visibly enhanced gloss effect** (Figure 4). The action of high shear forces was not mandatory in this case.

Lipstick formulation (Table 2)

Phase	Raw Materials	INCI	%	
			Placebo	With A-Sensofeel MFC
A	Beeswax	Cera Alba	20.00	20.00
	Castor Seed Oil	Ricinus Communis (Castor) Seed Oil	40.40	39.40
	Jojoba Oil	Simmondsia Chinensis (Jojoba) Seed Oil	24.50	24.50
	Cacao Butter	Theobroma Cacao Seed Butter	10.00	10.00
	MICA Red	Mica (CI 77019), Titanium Dioxide (CI 77891), Iron Oxide (CI 77491)	5.00	5.00
B	A-Sensofeel MFC	Cellulose, Glycerin, Water	-	1.00
	DL-α-Tocophérol (>97%)	Tocopherol	0.10	0.10

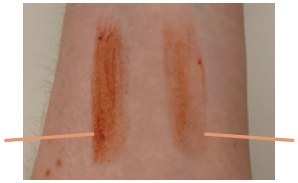


Figure 4

Applications

A-Sensofeel MFC is a **highly concentrated powder** with low use levels.

A-Sensofeel MFC can be used in both water-free and water-based formulation, offering **maximum flexibility** to formulators.

In anhydrous formulations, **A-Sensofeel MFC** can be incorporated like any other powdered raw material.

In aqueous formulations, **A-Sensofeel MFC** should be incorporated under high shear mixing. This results in complete rehydration and the formation of a gel-like fiber network. The fibers provide structure to O/W emulsions, making them visually denser and resulting in a smoother skin feel.

MINASOLVE®
BIO-INGREDIENTS FOR YOUR APPLICATIONS