
PLASTIC-FREE
BINDERS
FOR A
SUSTAINABLE FUTURE
OrganoClick®
PERFORMANCE MATERIALS, INSPIRED BY NATURE

HOME
OK compost
TÜV AUSTRIA
HOME
S2626

With innovative green chemistry, we mimic nature's own solutions and create sustainable materials and products of the future with cutting-edge technical performance and functionality.

Welcome to OrganoClick and our green world where we replace plastics and toxic chemicals with 100% biodegradable and fossil-free raw materials, and produce products that are entirely green on the inside —for a sustainable future.

Maria Wennman, R&D Director at OrganoClick.

ORANGE PEEL, SHRIMP SHELLS, WHEAT BRAN AND OAT HUSKS

INSTEAD OF PLASTIC

FOR A SUSTAINABLE FUTURE

Our R&D-department continuously develops new green solutions that can replace plastics and chemicals and give products and materials a green inside. More than 10 years of research and development have resulted in us now using various side streams from the food industry instead of fossil-based plastics and synthetic chemicals. For example, we use wheat bran, cellulose and potatoes as binders instead of cement in sound absorbers, and natural fatty acids from coconut and rapeseed instead of PFAS in our textile impregnations.

For our nonwoven binders, we use biopolymers, organic acids and proteins from fruit peel, shrimp shells, corn and potatoes instead of fossil-based plastic polymers. By combining these materials in different ways with our patented cellulose modification technology, we have developed a broad product family of biobased, biodegradable and plastic-free binders for nonwovens.

OrganoClick

ORGANOCATALYSIS, NOBEL PRIZE 2021

CLICK-CHEMISTRY, NOBEL PRIZE 2022

Two ideas that change the future. We were among the first to use Organocatalysis and Click-chemistry together in industrial applications. Now you know why we are named OrganoClick.

DEVELOPED BASED ON MILLIONS OF YEARS OF TESTING

The solutions to many environmental problems already exist around us in nature. The challenge is to find them and use them in the right way. By studying which molecules and biopolymers that provide different functions in nature, we have been able to adapt and use them in our green chemistries. For example, we have studied properties such as the mechanical strength of trees, the stiffness and hardness of crab shells, the water repellency of plant leaves and the flame retardant properties of certain grasses. Millions of years of evolution are clearly the most reliable testing regime around. And from now on, it's also a natural part of a modern green economy.

NATURE'S GREEN CHEMISTRY

Our idea is to mimic nature's own smart solutions through what is known as biomimetics. This is how we have created environmentally friendly and biodegradable green chemical alternatives to a number of fossil plastics and toxic chemicals that would otherwise be harmful to the environment. To date, we have 27 patent families, a range of products and a growing number of brands. For nonwovens, we have developed a number of different patented binder technologies and hydrophobization products. The possibilities are virtually endless.

WE "CLICK"-ON FOR A SUSTAINABLE FUTURE

Our technology for modifying cellulose fibres can be used to bind various functional organic molecules to wood, textiles, nonwovens, paper and other cellulosic materials with strong chemical bonds. Fibres and functional molecules "click together" by using recently Nobel Prize-winning Organocatalysis and Click-chemistry used in our patented OrganoClick technology. For our nonwoven binders, biopolymers bond with fibres in the nonwoven material and create a network between, and around the fibres that give them good dry and wet strength.

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MADE GREEN INSIDE by OrganoClick

With our biobased binder, OC-BioBinder,
our customers produce the world's first fossil-
free and home compostable premium napkin.

THE WORLD'S FIRST
FOSSIL-FREE AND HOME-COMPOSTABLE PREMIUM NAPKIN

We worked on developing a binder that could be used for airlaid table-top products for many years. In 2021 we achieved this when the world's first fossil-free home-compostable premium napkin was launched by one of our customers. The launch has been very successful and the product is now leading the shift towards a more sustainable future.

OrganoClick is currently involved in a large number of late stage development projects together with our customers and we anticipate to see many nonwoven-based products that use OrganoClick's biobased, plastic-free and home compostable binders to replace fossil-based alternatives.

"We are very proud of the collaboration with our customers which have resulted in the world's first fossil-free premium napkin. With our biobased and biodegradable binders we enable our customers to end their dependency on oil based plastics and thereby release zero microplastics if the product is left in nature. The fossil free premium napkin is a great example of real circular design, and is a product which now has entered into the true bioeconomy."

Mårten Hellberg, founder and CEO of OrganoClick


MADE GREEN INSIDE by OrganoClick
100% compostable and biodegradable materials
Decomposition time of 6–8 weeks
Natural raw materials from FSC-certified forests
Approved for organic farming in Denmark, Sweden, the Netherlands and Canada

THE WORLD'S FIRST
PAPER CERTIFIED FOR USE IN ORGANIC CROP PRODUCTION

Growing young plants using paper pots is the perfect solution and help reducing plastic used in horticulture. Ellepot is a leading and innovative company for agricultural products, and they made us aware of this. Together with Ellepot and Ahlstrom we have worked for many years on developing a binder system that could be used for agricultural products that resulted in a fully compostable product. In 2020 we achieved this when our customer Ahlstrom and Ellepot decided to launch the world's first paper certified for use in organic crop production.

"Working with our suppliers in co-developing smarter materials for the Ellepot customized solution supports our vision to help customers improve production efficiency, optimize handling, reduce plastic, and deliver increased yields and lower costs of goods produced. Minimum effort, maximum impact being the key feature to a smarter solution, we trust the co-development will continue to provide new and sustainable materials for the future."

Lars Steen Pedersen, CEO Ellepot A/S, Denmark

BioBinder™

Product	Softness/ Stiffness	Dry strength	Wet strength	Character	Application method	Typical applications
OC-BioBinder Lily	Soft	++	++	Hydrophilic	Spray, impregnation	Airlaid, wetlaid, carded
OC-BioBinder Clover	Soft	++	+	Hydrophilic	Spray, impregnation	Airlaid, wetlaid, carded
OC-BioBinder Pine	Stiff	+++	+	Hydrophilic	Spray, impregnation	Wetlaid, carded
OC-BioBinder Oak	Very stiff	+++	+++	Hydrophilic	Spray, wetend	Wetlaid, carded
OC-BioBinder Lotus	Soft/stiff	++	+++	Hydrophobic	Spray, impregnation	Wetlaid, carded
OC-BioBinder Olea	Medium	++	+	Lipophobic	Spray, impregnation	Airlaid, wetlaid, carded

OUR PRODUCTS

We offer a variety of binders with different mechanical properties. Our binders are available in varying degrees of softness or stiffness (Tg), with varying degrees of dry and wet strength, and as hydrophilic, hydrophobic or lipophobic.

Our binders have varying viscosities and can therefore be applied to nonwoven or textile materials in different ways. Our binders are water-based and are applied to materials by spray impregnation, dip impregnation or coating. After application, the nonwoven materials are dried and the binder is cured at elevated temperatures to obtain dry and wet strength.

100% BIOBASED, BIODEGRADABLE AND CERTIFIED AS TüV OK COMPOST HOME

Our products are classified as non-irritating and non-hazardous to the environment according to the European REACH regulation and CLP. Our binders are also classified as "readily biodegradable" in accordance with OECD 301A and can be used to produce 100% biodegradable and home-compostable nonwovens.

We also provide 100% biobased binders, tested and verified according to CEN/TS 16137: 2011. Several of our binders are also approved for food contact according to BfR XXXVI and FDA, Sec. 176,170 and 176,180. We also have binders that are classified as plastic-free according to the EU's new Single Use Plastic directive (SUP) and our Lily binder is certified to be OK COMPOST HOME according to TüV.

APPLICATIONS

Our biobased and biodegradable binders are now adapted for several different nonwovens and specialty papers including airlaid, wetlaid, and carded nonwoven. We have binders that can be used for most types of fibre, such as natural fibres from wood, cotton, viscose, Tencel, hemp and pulp. We also have compostable binders that are adapted for synthetic fibres such as polyester, PLA, mineral fibres, glass fibres and blended fibres. Today, our binders are used in napkins and tablecloths made of airlaid nonwoven, wetlaid nonwovens for hygiene and agricultural applications, and knitted interlinings, and more.


AquaSil™ Tex
MADE GREEN INSIDE by OrganoClick
OC-AquaSil™ Tex — PFAS-free, and 100% biodegradable, for industrial hydrophobization of materials.

OUR GREEN ADDITIVES

OrganoClick has also developed additives and other materials that supports the mission of a world free from plastics and harmful chemicals. In addition to our biobased binders we also supply the following functional additives to the nonwoven, paper and technical textile industries.

WATER REPELLANTS

Today many frequently used water-repellant chemistries are using ”Forever-Chemicals” such as PFAS that is harmful for you and for the environment. OrganoClick has developed a biodegradable water repellant alternative that provides excellent water repellency to nonwovens, paper, and technical textiles.

REDUCED LINTING

Plastic microfibers are one of the the major marine pollutant throughout the world. For reducing this problem, OrganoClick has developed a biobased and biodegradable binder that can be sprayed onto the surface of nonwovens and technical textiles to reduce fiber linting.


Vision:
Nature and water
free from plastics
and fossil chemicals
Misson:
Replace plastics and
fossil-based chemicals
with biobased solutions

OUR GREEN FUTURE IS NOW. WHEN'S YOURS?

Why are chemicals made from fossil-based oil? Why use plastic that is never degraded for products that are used only once and then thrown away? These were the questions two young researchers asked themselves in the mid-1990s when they began their research into natural chemical processes, known as biomimetics. It was this research that led to the foundation of OrganoClick in 2006.

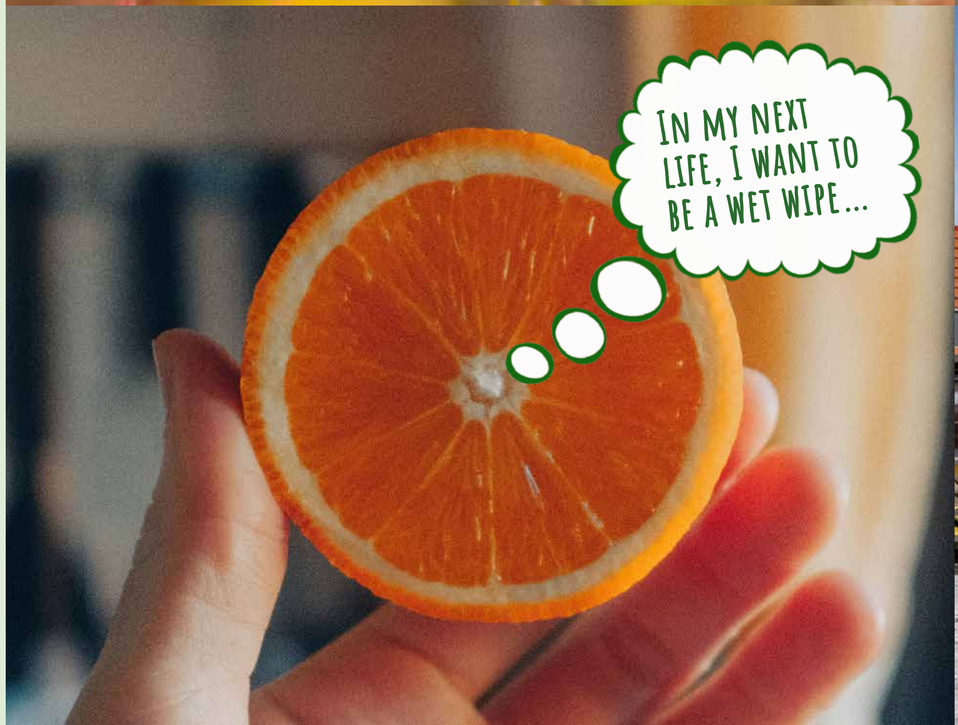
Since then, we have doggedly researched green substitutes for plastic polymers and toxic chemicals to create a variety of technical functions in materials such as textiles, nonwovens, biocomposites and wood. And our persistence has paid off. Today, we are a fast-growing green industrial company. We manufacture at scales of several thousand tonnes per year and deliver worldwide to customers who have chosen to replace plastics, oil and toxins with biodegradable alternatives.

This is how we enable companies and industries to reduce their ecological footprint, achieve their environmental goals, and become part of a circular economy. What are your needs and how can we help you? Join us to break new green ground and make the world a better place. The future looks green! It has to.

“Today, we manufacture at scales of several thousand tonnes per year at our production facility just north of Stockholm. Our biobased and biodegradable nonwoven binders are now being used and implemented in table-top products, wet wipes, hygiene applications and agricultural textiles. As interest in replacing fossil-based binders grows, we have now also started to look at the best way to add additional capacity in North America.”

Mårten Hellberg, founder and CEO of OrganoClick

WE ARE A CARBON NEUTRAL COMPANY!



If you were an orange and your best days were behind you, what would you like to come back as? Wet wipes, perhaps, agricultural mulch films, or a tablecloth? Because isn’t it fantastic that we reuse side streams from the food industry, including orange peel, to give leftovers a new life as a bio-based binder in napkins and nonwovens.

"We started OrganoClickin 2006 with the vision of enabling a plastic-free, non-toxic future, based on the idea of mimicking nature's own smart solutions with green chemistry. The chemical formula shown here is a progression of the basic formula that was drawn up first, and which we use as a starting point in all our innovations. For example, for the idea of making a premium napkin with a completely green inside."

Mårten Hellberg, founder and CEO of OrganoClick

MADE IN SWEDEN

MADE GREEN INSIDE by OrganoClick

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