

Inspiring Chemicals



AkzoNobel

Tomorrow's Answers Today



eka





Looking for improvement?

Look no further than Eka Chemicals.

We are one of the world's leading suppliers of bleaching and performance chemicals for the pulp and paper industry. We also develop specialty products for other industrial applications.

Eka is a partner with the capacity and experience (we started in 1895) to develop sustainable new business opportunities. In fact, the greater part of our efforts are geared to addressing key issues such as reducing the use of fiber, water and energy. We believe the future of paper is bright.

We look forward to hearing more about your particular challenges!

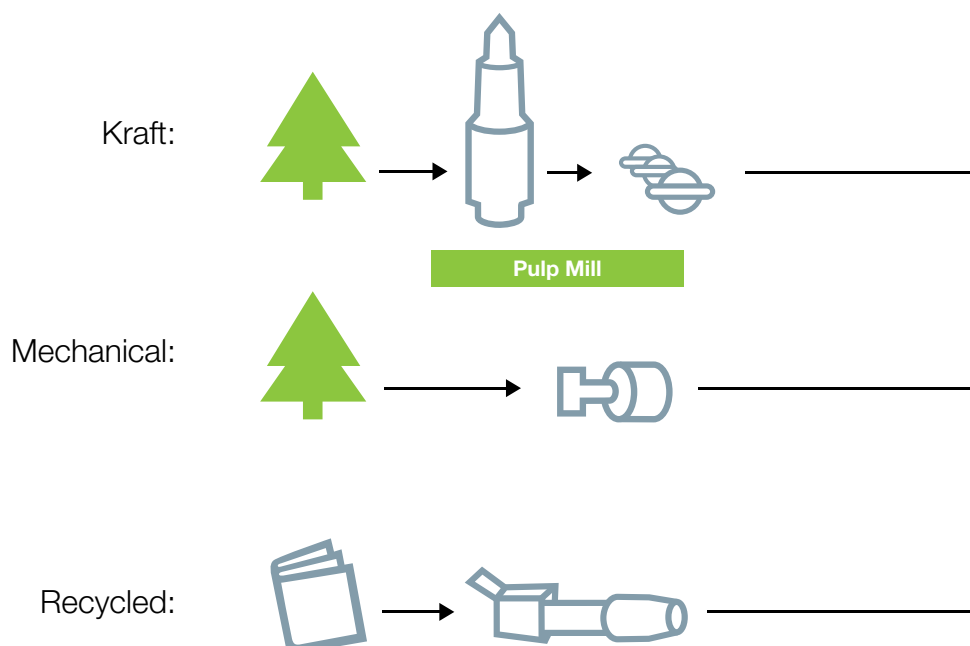
Let's make a difference throughout your pulp process

The secret to pulp chemicals is all about being able to deliver. With our global presence, robust products and solutions, and reliable track record, we can assure quality throughout the value chain. Simply put, you can trust us to supply what you need.

Eka Chemicals is the largest producer of sodium chlorate worldwide, and one of the largest suppliers of hydrogen peroxide to the pulp and paper industry.

We also supply and operate plants and equipment for the processing of pulp chemi-

cals. Onsite production of chlorine dioxide means we take care of your chemicals management. Our chemical island concept, enabled by our engineering force, allows us to create synergies between electricity and chlorate production.



Bleaching

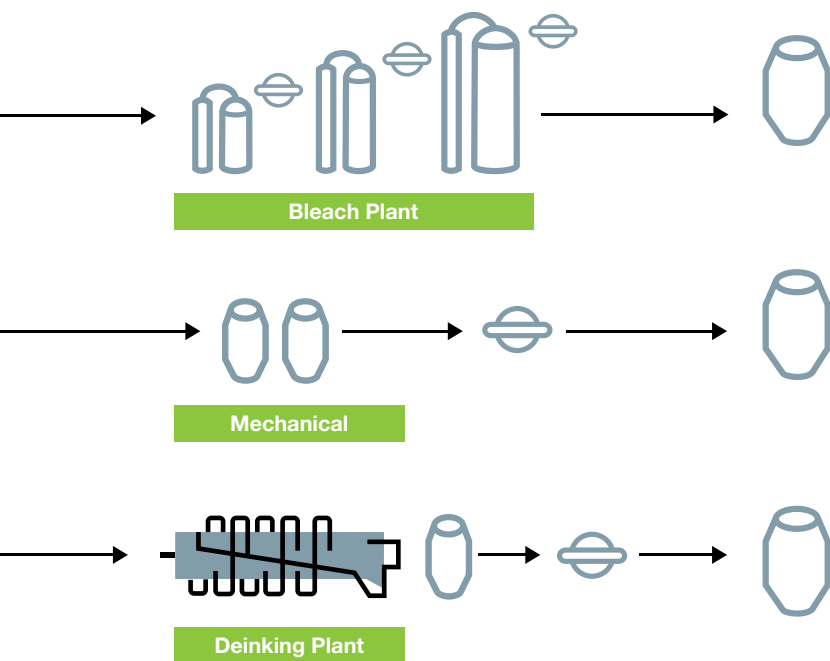
The combination of sodium chlorate, hydrogen peroxide and chlorine dioxide technologies makes Eka a unique supplier of bleaching chemistry.

Sodium chlorate
Chlorine dioxide
Hydrogen peroxide
Sodium hydroxide



The key is doing our homework properly and making sure we really understand what the customer wants and needs.

Antonio Carlos Francisco
General Manager of Eka Chemicals do Brazil



Deinking

Our total-system approach ensures that chemistry used in one area will not cause problems in others.

Emulsions
Soaps

Debonders for fluff pulp

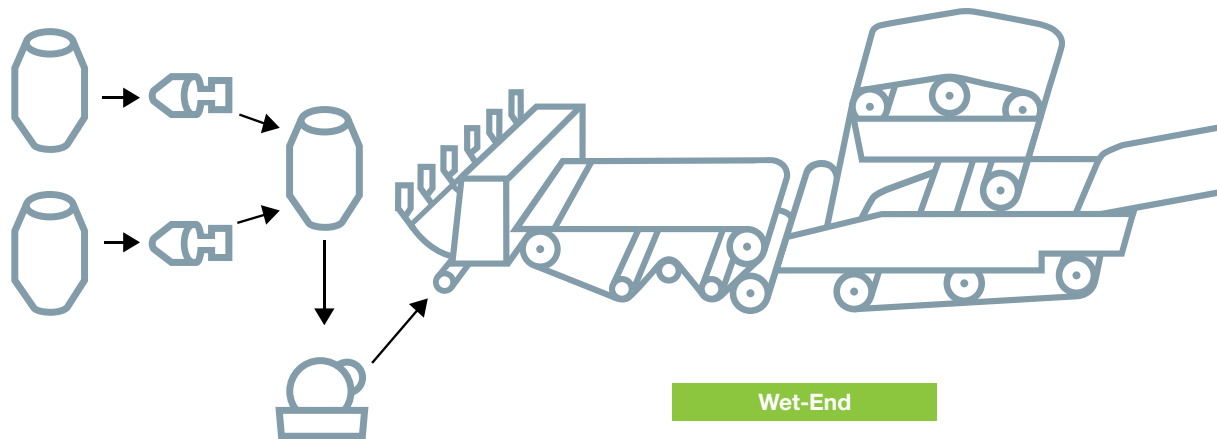
Our additives help you manufacture pulp with low burst strength and low required defibration energy, without deteriorating the absorbent properties of the fluff.

Let's make a difference throughout your paper process

We can offer you a unique range of high-performance chemicals for papermaking. As we are deeply involved in our customers' processes, we are constantly on a mission to meet your needs for cost efficiency, productivity and sustainable solutions.

Thanks to our broad experience, we have a comprehensive picture of your processes, and understand the effect chemicals in one process step will have on later steps. This means we can develop overall interactive solutions that optimize your processes.

By adding the right chemical you can actually end up using less chemicals all in all. Saving money, benefiting the environment, and increasing runnability and quality at the same time.



Retention, dewatering and dry strength

We offer Compozil—the most advanced and flexible retention, dewatering and dry strength systems available on the market, customized to your paper machine application.

Colloidal silica
Polymers
Starch
Compozil
Fixatives

Sizing

We offer both surface and internal sizing products so you can find the perfect combinations to achieve targeted paper properties.

Size press products
ASA
AKD
Rosin

Wet strength

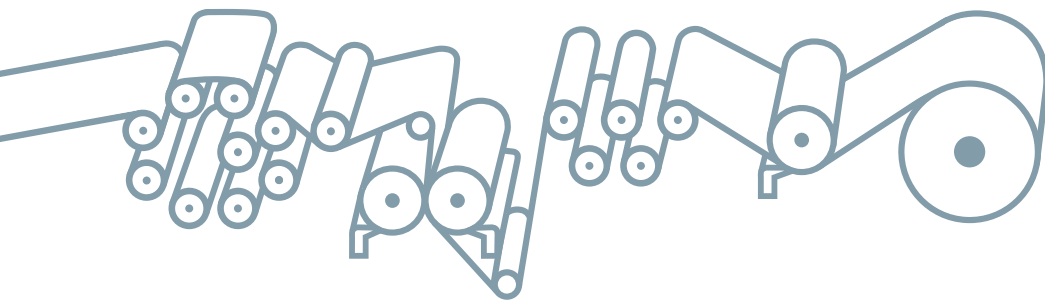
We have developed wet-strength products for all applications.

PAAEs
Softeners



The crucial part is interlocking commercial and practical reality with outside-the-box thinking. Only the most competitive ideas are developed here.

Patrik Simonson
Senior R&D Specialist in Sweden



Dry-End/Finishing

Coating

Our products optimize the relationship between the fiber, the furnish, the base sheet and the finished product.

Yankee coatings
AZC
SBR latex
Rheology modifiers

Antiskid

Microbiological treatment

Eka Purate





Eka is located where pulp and paper is produced. We are serving our customers from plants and offices in around 30 countries.

Discover your true potential

When we develop our chemicals, our aim is to make your processes run smoother, cutting costs and improving sustainability along the way. But of course it takes more than chemicals to make everything work at the mill. And that's where our experts come into the picture.

No matter where you are, we are there for you. We have 36 plants in 19 countries, and operate through three regional units—Europe, Americas and Asia Pacific—in order to provide you with the best services and the most knowledgeable people.

As we are the only chemicals company able to offer engineering and industrial IT in addition to a wide range of pulp and paper chemicals, we can also get a comprehensive grasp of your process.

New ideas

We are happy to partner with you and discuss innovations and applications that will give your process a competitive edge. Your challenges make us tick.

We currently hold around 2,000 patents, and add approximately 15 new ones every year. We have over 100 people working full-time with research, development and innovation.

All work is carried out in close cooperation with our regional business units. The key to our success is the combination of new products, processes and concepts, timing, and our strong team of experienced and knowledgeable people.

If I can't resolve an issue myself, I act fast and make sure the right expert assists the customer. We're a dedicated team.

Martin Chen
Senior Account Manager in China

Innovation put into practice

Being one of the world's largest suppliers of pulp and paper chemicals, we have seen more and solved more than many of our com-



petitors. We understand your needs, and our vast application knowledge means we can achieve exactly what you want.

Our people have mastered the art of pulp and papermaking down to the molecular level. This, together with our capacity for innovation and our consistently high quality, makes us the preferred start-up technology at many mills across the world. For instance, the world's largest fine paper machines used Compozil Fx as start-up technology. And solid proof of the excellent results achieved is that our customers keep on using our products and solutions. Compozil, for instance, helps to produce 50 million tons of paper and board per year.



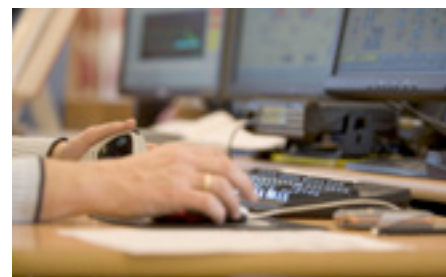
Q12 Production

No	Name	Unit	Details
Production	12.4	120	Details
Consumption	1.94	g/l	Details
Specific Consumption	15.4	g	Details
Yield	25.2	%	Details



Be efficient Do less

We want to make it easier for you to do what you do best. Our onsite and Industrial IT solutions enable you to optimize your chemicals management and energy consumption, and make better use of your time, capital and personnel.



Online monitoring and visualization of process correlations and equipment performance is a proactive, safe and cost-efficient way of working together to assure access to, and optimized use of, essential chemicals. Today we are connected to more than 75 customers, 30 plants and 500 users, delivering 750 million data points each day. Our unique technical platform (EPI) has been developed by our process control engineers and industrial IT specialists over the years. The result is a seamless global independent solution.

In fact, we use the exact same platform to connect and optimize our production and integrate it to SAP. Our plant in Rjukan, Norway is run from Bohus, Sweden in this manner.

Remote means being closer

Our industrial IT solutions connect your mill to our expertise 24/7. We can optimize your chemicals management, making your chemicals handling more efficient and lowering costs.

As every part of your process can be connected, we always have the big picture. For example, by monitoring backwater solids concentration, we immediately see if the retention program needs optimizing, and we are able to troubleshoot issues before they become critical.

And when our experts visit your mill in person, they can focus on improvements based on facts and figures without having to spend time checking meters and gauges.

According to your needs, our services can be tailored to include monitoring, surveillance, optimization and production control.

Customers don't run dry with us. Our data is reliable, and our vast experience of chemicals and paper-making processes means we can act as their very own process engineers would.

Kimona Häggström
Process Engineer in Sweden

VMI

Vendor management inventory is the simplest way to make sure your mill never runs dry. We streamline your purchasing, invoicing and stock control for all your chemicals. You pay for what you use via a single invoice, which of course means less administration for you.

Chemical management

We can manage the speed, quality and dosage points of your chlorine dioxide production, Chemical Island, retention system etc. Constant access to updated information also makes knowledge sharing easy within Eka. Our customer centers interpret the information and can take action directly, improving runnability and quality.

On-site production

A hassle-free, cost-efficient solution for producing chemicals, such as chlorine dioxide. We can take charge of an existing facility or build a new one. The delivery point for the chemicals is moved deeper into your process, which frees up your resources.

Chemical Island

Our Chemical Island concept is our flagship for supply chain excellence. We run a number of Chemical Islands and have more in the planning stage. We take full responsibility for your chemicals management system onsite, and provide state-of-the-art, cost-efficient, safe and reliable production of chemicals such as sodium chlorate, chlorine dioxide and hydrogen peroxide, plus handling of other pulp and paper chemicals.



We mean business when it comes to sustainability. How about you?

By having a solution-based approach to sustainability, we can add value throughout our customers' processes and improve their environmental performance vastly. Most of our patents of the last 20 years have focused on fiber, water and energy. And there is more to come. Check out recent developments at eka.com.



As we see it, there is only one way to ensure long-term growth—by actively and strategically addressing sustainability issues. Here and now.

To show that we mean business, we are accelerating the development of sustainable products that save and/or make better use of fiber, water and energy.

Compozil, for example, makes more filler loading possible, which is especially interesting today, when most mills need to find new ways of working in order to run more cost effectively.

Dan Pernsteiner
Senior Papermaking Specialist
in North America

How can we help you?

Our solutions enable you to use less virgin fiber and more recycled and biodegradable materials, and obtain more and better products from each ton of fiber. We can also reduce and optimize your energy consumption—and make it possible to use more renewable sources of energy. What's more, we can reduce your water consumption by making it easier to re-circulate and purify water. All of this can in fact be achieved simultaneously.

One product, several improvements

Our goal is to develop each product to address several sustainability issues. For example, Compozil retention systems not only allow for higher filler levels in many paper grades, but also optimize water usage, as dewatering in the paper machine's wet end is faster.

Our Chemical Island concept—total onsite chemicals management system—is the best available technology to produce sodium

chlorate and other chemicals needed for pulp and paper production. In addition, the required electricity can be produced from biomass by the mill. The proximity of chlorine dioxide production naturally means reduced transportation need, improving eco-efficiency and safety.

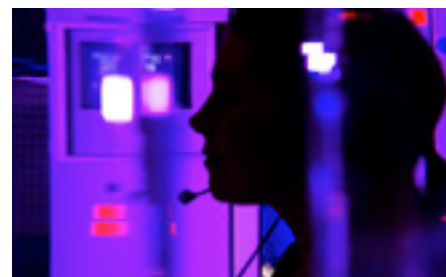
Sustainability attracts

Delivering more sustainable solutions to our customers is a precondition for a sustainable future, and for our stakeholders' confidence in us. It is also an important factor for attracting talented employees. This in turn stimulates development and generates more value for our customers.



Chemical know-how applied beyond paper

Specialty products are part of our heritage. We have produced pure alkali, i.e. the renowned Eka Pellets, and potassium chlorate since the early days of Eka.



Our well-proven, reliable and successful technologies, and our operational synergies, have also paved the way for applications for industries other than the pulp and paper market. Some of these products are a backward integration into Eka's own processes, while others are developed for unique applications that address specific customer needs.

Kromasil

We offer a unique high-efficiency spherical silica-based HPLC (High Performance Liquid Chromatography) packing material for a wide range of applications. Kromasil can be used from the smallest substance analysis to full-scale multi-ton production lines, for example preparative purification of active pharmaceutical ingredients, such as insulin.

Its robustness, reproducibility and excellent surface chemistry have made Kromasil one of the world's leading brands for HPLC.

Expancel

When you heat an Expancel microsphere, its volume increases more than 40-fold. This saves on costs for materials, production, finishing, handling and transportation. Expancel

I simply enjoy helping customers succeed.

We've got a great product and track record to prove our point.

Tapio Pajari
Senior Specialist for Purate in Finland

is used in a wide range of applications, such as paint, printing ink, artificial leather, crack filler, plastics, paper and board, textiles and non-wovens, underbody coatings and sealings, modeling clay, footwear, tennis balls, artificial marble, wine bottle corks, vehicles and boats.

Permascand

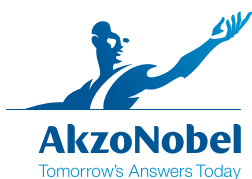
High technology specializing electrochemistry produces activated titanium anodes, electrolyze cells for the manufacture of chlorate and chlorine alkali, laser processing and processing equipment in titanium for offshore and chemicals industries.

Purate

Eka Chemicals is the world leader in chlorine dioxide production. Purate is a global proprietary technology used for water disinfection, metals reduction, effluent and cooling water treatment, odor control, paper machine biocide etc. Safe, reliable, cost effective, efficient and easy to operate. Makes water and food safe to drink and eat.

Industrial specialties

We provide the leading technology, with over 40 years of knowledge and experience to guarantee reliability. Our brands for colloidal silica—Bindzil, Levasil and Bevasil—are used in the precision investment castings, coatings, construction and electronics industries. Our pure alkali pellets are used in most laboratories. Our potassium chlorate products are used to produce matches and fireworks.



www.akzonobel.com/eka

Eka Chemicals is a business unit of AkzoNobel.

Eka Chemicals, with 2,550 employees in 28 countries, is a business unit within AkzoNobel. Eka Chemicals is a leading supplier of bleaching chemicals, paper chemicals and systems to the pulp and paper industry throughout the world, and supplies certain special chemicals to the pharmaceuticals industry, water treatment, the electronics industry etc.

E-mail: ekainfo@akzonobel.com
www.eka.com