



Performance chemicals for the pulp and paper industry.



Pulp and Paper Chemicals Product Range

Eka Chemicals is one of the world's leading manufacturers of chemicals for the pulp and paper industry. Our extensive experience in pulp bleaching and papermaking gives us a result oriented approach to pulp and paper chemicals and their use.

Furthermore, Eka Chemicals has vast experience and competence in the supply and operation of plants and equipment for the processing and preparation of pulp and paper chemicals. This includes vendor managed inventory (VMI) and onsite production. The offerings differ in scale from total involvement in a chemical plant, with remote control and monitoring of all operations, a so-called "Chemical Island", to controlling a single process or

make-up unit. In all our activities we are committed to minimizing the impact on the environment, using natural resources responsibly and ensuring safe handling of our chemicals.

This product catalogue presents a summary of the range of pulp and paper chemicals that we offer. Some products are only available in certain markets. The descriptions are very brief and make no claim to be adequate as a basis for application. We are happy to provide more information or specialist assistance to ensure that the products are used as advantageously as possible.

Bleaching Chemicals

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

Over the last few years, we have developed our product offers to include:

Eka SC Sodium Chlorate

Delivered as crystals by truck or rail. **Eka SC** is converted to chlorine dioxide, which is used for ECF bleaching of chemical pulp.

Eka HP Hydrogen Peroxide

Eka HP is delivered as a 19 %–70 % ready-to-use solution by truck or by rail. Eka HP is primarily used for bleaching of chemical pulp, mechanical pulp and recycled fiber. Eka HP can also be used for various special applications outside the pulp and paper industry.

Eka ClO₂

This concept is the most efficient method for large-scale conversion of Eka SC to chlorine dioxide. Eka Chemicals owns and operates the onsite generator. Eka SC, Eka HP or another reducing agent, together with sulphuric acid, are used as raw materials. Optimal operating conditions, highest safety standards and cost efficient operation are ensured via remote supervision or control of the onsite generator. Eka ClO₂ generators can be supervised from one control room, around the clock, by highly skilled operators. This ensures the highest availability and makes it easy to implement process improvements.

Eka Purate®

Eka Purate is a patented concept for onsite small-scale generation of chlorine dioxide, up to 4 MT/day. Used for chemical pulp bleaching in special pulp grades or when some additional capacity is required in large scale operations.

De-inking Chemicals and Systems

Eka RF Series

A range of chemicals for flotation deinking processes.

Eka RF 4000 Series Soaps
Eka RF 4200 Series Surfactants
Eka RF 4400 Series Emulsions
Eka RF 4600 Series Blends

S-Quad™

A deinking system, which lowers chemical costs and increases pulp brightness by enabling the flotation deinking process to operate at a neutral pH.



Retention, Dewatering and Dry Strength

Compozil®

The Compozil systems are the most advanced and flexible retention, dewatering and dry strength systems available. The first Compozil system was developed by Eka in the 1980s. Today we offer custom-designed systems to meet the challenges of any paper machine application.

The systems are based on a wide range of engineered colloidal silica nanoparticles, Eka NP, fed in any combination with Eka PL polyacrylamides, Eka ATC anionic trash catchers, Eka DS dry strength agents and Eka CS cationic starch products.

Compozil Select

Our most advanced system, suitable for fine paper, white top liner, bleached board, wood-containing and recycled grades.

Compozil Fx

A Compozil system designed specifically for high-speed fine paper machines, producing paper with high ash content.

Compozil System components:

Eka NP Series

Colloidal silica nanoparticle products, with properties allowing maximum performance and efficiency in polymer or starch-based retention systems, acid or alkaline pH, and with any grade.

Eka PL Series

A complete line of polyacrylamides available as powder, emulsion or dispersions, in a wide range of charge densities and molecular weights. Includes unique products developed for specialized performance and specifically for enhanced interaction with Eka NP in Compozil systems.

Eka ATC Series

Anionic trash catchers (Fixatives), organic or inorganic, for charge control and fixation. In addition, a variety of new products and chemistries provide enhanced colloidal retention, improved wood pitch, white pitch and stickies control, and better ash retention.

Eka CS Series

Cationic starch products. Include all common starch varieties, at a wide range of cationicity levels.

Eka DS Series

A broad range of dry strength polymers used to develop strength properties in paper and board.

Sizing

Internal Sizing

Eka CR Series Cationic rosin dispersions

Used for internal sizing from acid to slightly alkaline wet end conditions. These formulations are known for their outstanding performance, especially under demanding conditions, e.g. in at elevated wet end temperatures.

Eka CR products are available as pre-activated or highly concentrated dispersions (up to 52 %) requiring an additional aluminum component, or as one shot products containing the sufficient amount of aluminum salt.

Main features are H₂O₂ resistance for liquid packaging grades and no sizing loss.

Eka DR Series Alkylketene dimer (AKD) dispersions

Starch- or polymer-stabilized for neutral and alkaline sizing of all kinds of paper and board. The main features are hard sizing and lactic acid resistance. The active component – alkyl ketene dimer – is made from renewable raw materials. Besides standard AKD wax, we also offer dispersions made from high melting point AKD wax for liquid packaging board and high-temperature wet-end applications. Our dispersions are available at 7–25% solids. The formulation can be adapted to the required wet-end conditions and also modified or promoted to enhance the curing rate of the sizing development.

Eka SA Series Alkenyl succinic anhydride (ASA)

These products are suitable for fine paper and packaging grades over a wide pH range from acid to alkaline. ASA is a 100% active product and is generally emulsified on-site with cationic starch or a

synthetic polymer. The main benefit is cost-efficient sizing. Application is instant and easy thanks to the latest on-site technology, which is simple, robust and flexible, with equipment that requires minimal space.

Eka SA 200 Series

Our standard ASA emulsified in starch, widely used in a broad range of applications such as fine paper and packaging grades.

Eka SA 400 Series

A range of unique ASA products which are emulsified in very simple and reliable on-site units using liquid starch or even plain water as the only dispersing agent.

Eka SA 600 Series

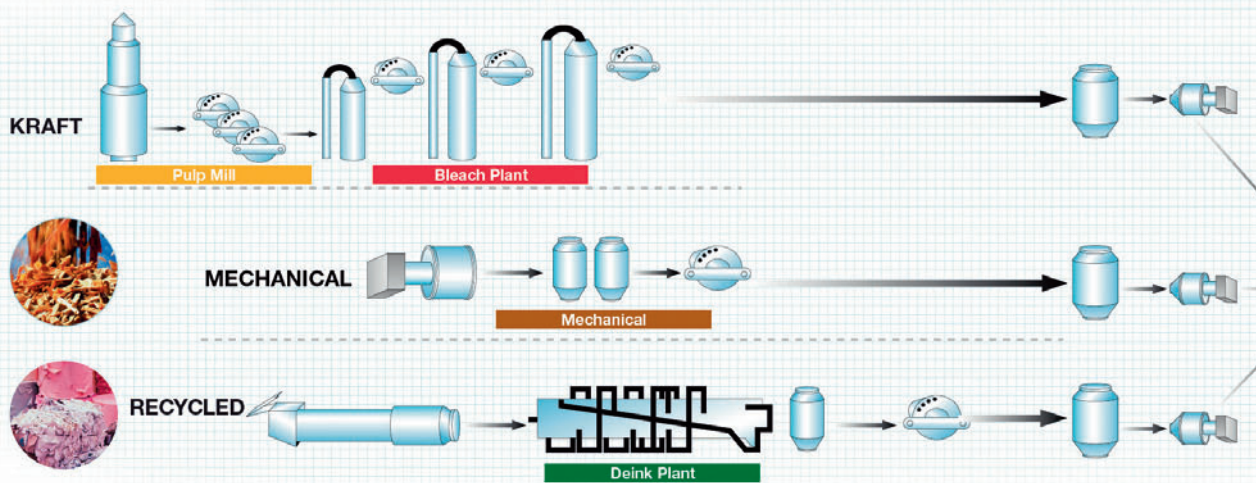
The latest Eka SA 600 Series represents an even more advanced technology utilizing organically modified nano-particle for easier application.

Surface sizing

Eka SP Series Size press products

Our surface sizing products cover the full range of anionic, cationic and amphoteric dispersions of styrene acrylic ester copolymers, from 25% to 34% solids.

These are the preferred products for the surface treatment of fine paper, testliner and board made from virgin and waste based fibers. Eka SP has the potential to reduce or eliminate internal sizing, which cuts cost, increases machine cleanliness and enhances printability.



Wet Strength

Eka WS Series

These wet strength resins have been developed with two main targets: purity and efficiency.

Eka WS X14 and WS X0

Wet strength resins with extremely low CPD and DCP content. They respond to the most demanding AOX targets in the effluent and OX in the paper. These are unique characteristics on the market. Note that the Eka WS X14 provides the highest wet/dry ratio available on the market.

Eka WS 325 and Eka WS 505

Strong and stronger, with an efficiency uncommon in second generation technologies. Used in a wide range of applications from board and label, to the top premium tissue grades.

Tissue

A complete portfolio now available covering a wide array of applications:

Eka Soft T Series

Our most advanced softeners and debonders provide bulk and surface softness. Applied to the stock or sprayed on the sheet surface.

Eka Soft S Series

The latest softener designed to respond to the most stringent regulatory challenges. Very efficient and allows to reach new level of softness.

Eka Soft B, M, R

For a very efficient Yankee surface protection: a full range of creping adhesives, coating modifiers and release agents, with chemistries to respond to bulk and surface enhancement as well as performance. Tailor-made products for your particular demands.

Coating Products

Eka Flow Series

Eka flow are a portfolio of liquid, synthetic, alkali swellable rheology modifiers. These customizable synthetic polymers are available as Alkali Soluble Emulsions (ASE) or Hydrophobically Modified Alkali Soluble Emulsions (HASE). Eka Flow portfolio of coating additives are widely used in coated paper and board mills around the world, delivering properties that significantly improve coating operations. Main benefits are improved runnability, coating surface properties and drying efficiency.

Eka AZC/PZC Series

Ammonium or potassium-based zirconium crosslinkers. The crosslinker of choice for coated paper and board. They also help reduce linting and dusting when used in uncoated papers.

Eka RC Series

Glyoxal-based resins. Insolubilizers for starch based coating and size press applications.

Eka LC Series

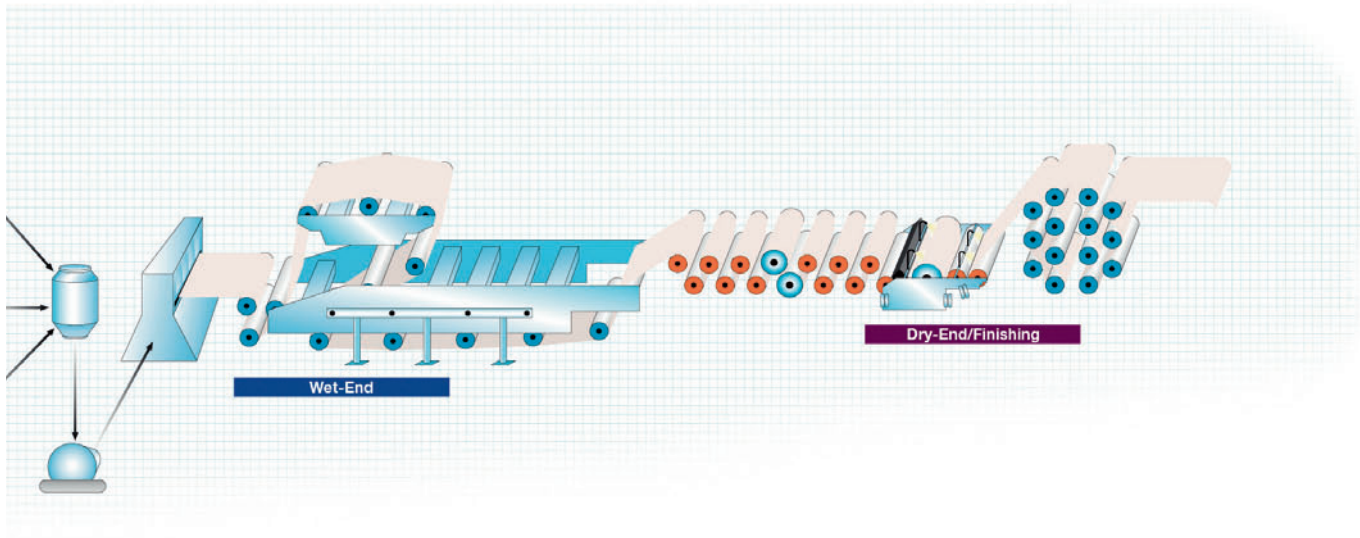
Calcium stearate and polyethylene lubricants that offer superior lubrication and surface texture.

Eka Sperse Series

Pigment/Coating dispersants.

Eka Stat Series

Static electricity dissipators.



Fluff pulp

Eka Soft F Series
Fluff pulp debonders

Formulated cationic surfactants of quarternary ammonium compound type. Used as debonders in fluff pulp manufacture. Eka Soft F products are formulated so that the wetting characteristics are only marginally affected.

Eka Soft F60 Series
Designed for the latest European legislation with a very high efficiency.

Water Treatment Chemicals

Eka WT
Polyaluminum chlorides for internal and external water treatment applications.

Eka PAM
Polyacrylamides for efficient flocculation in water treatment and sludge dewatering applications.

Dispersants and deposit control

Eka DPC Series
A selection of surfactants suitable for a wide range of applications in pulp and paper production, such as

- Pitch control
- Deposit control
- High performance cleaning for ultra-filtration processes

Microbiological Control

Eka Purate®
A small-scale ClO₂ technology concept that provides cost-effective microbiological control in pulp and paper manufacturing, as well as in papermill water and waste treatment applications.

Eka BIO Series
A range of organic biocides for preservation of paper additives. Also generally suitable for microbiological control.

Anti skid

Eka PA
Specially formulated colloidal silica-based products for use as frictionizers.

Defoamers

Eka DF Series
A range of defoamers and deaerators for all applications in pulp and paper production.

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. Turnover 2010 amounted to 1044 mEUR. 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.

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