



AkzoNobel



**Eka Flow rheology modifier portfolio.
Optimized rheology and water
retention for your coated paper grades.**

eka
—

Eka Flow rheology modifier portfolio

Part of our complete paper and board coating additives portfolio.

Eka Flow polymers 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.

Performance benefits include:

- Build and stabilize coating viscosity/rheology
- Increase water retention for improved runnability
- Optimize runnability by adjusting the viscoelastic flow properties of coating
- Improve coated surface by controlling coating immobilization
- Maximize coating solids for improved coverage and drying efficiency
- Develop polymer networks that build coating structure

Eka Flow is just one product line in Eka Chemicals complete coating additives offering. If you would like to learn more about our complete line of products, please contact your Eka representative or visit www.eka.com.

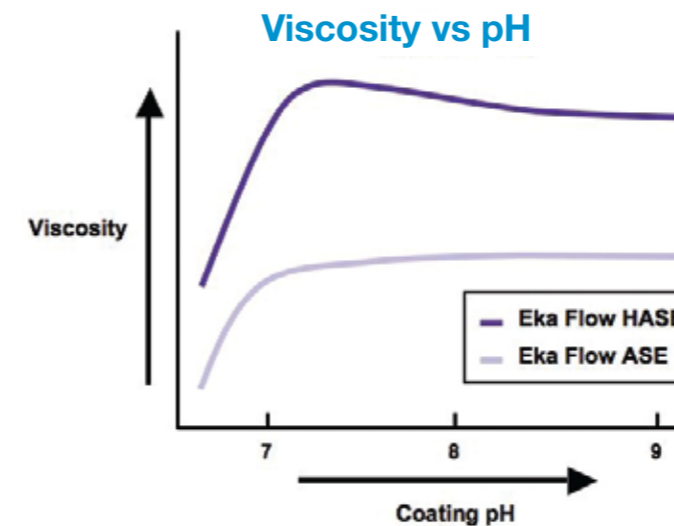
Eka has the experience to optimize your coating rheology performance.

By utilizing a specialized, technical, paper sales force and listening to your requirements and understanding your needs, Eka Chemicals has become the industry leader in coating rheology additives. Through decades of research, applications support and production, Eka has developed a wide range of multifunctional products and performance options that are optimized for your formulations, equipment, and product requirements. Whether you are producing coated board or ultra lightweight coated paper, Eka can develop a cost-effective rheology solution to meet your needs anywhere in the world.



Performance and versatility

The HASE rheology modifiers are highly efficient and produce viscosity build rapidly. The ASE rheology modifiers specialize in the development of coating water retention. Each polymer group has a different response to coating pH as shown in the graph below.



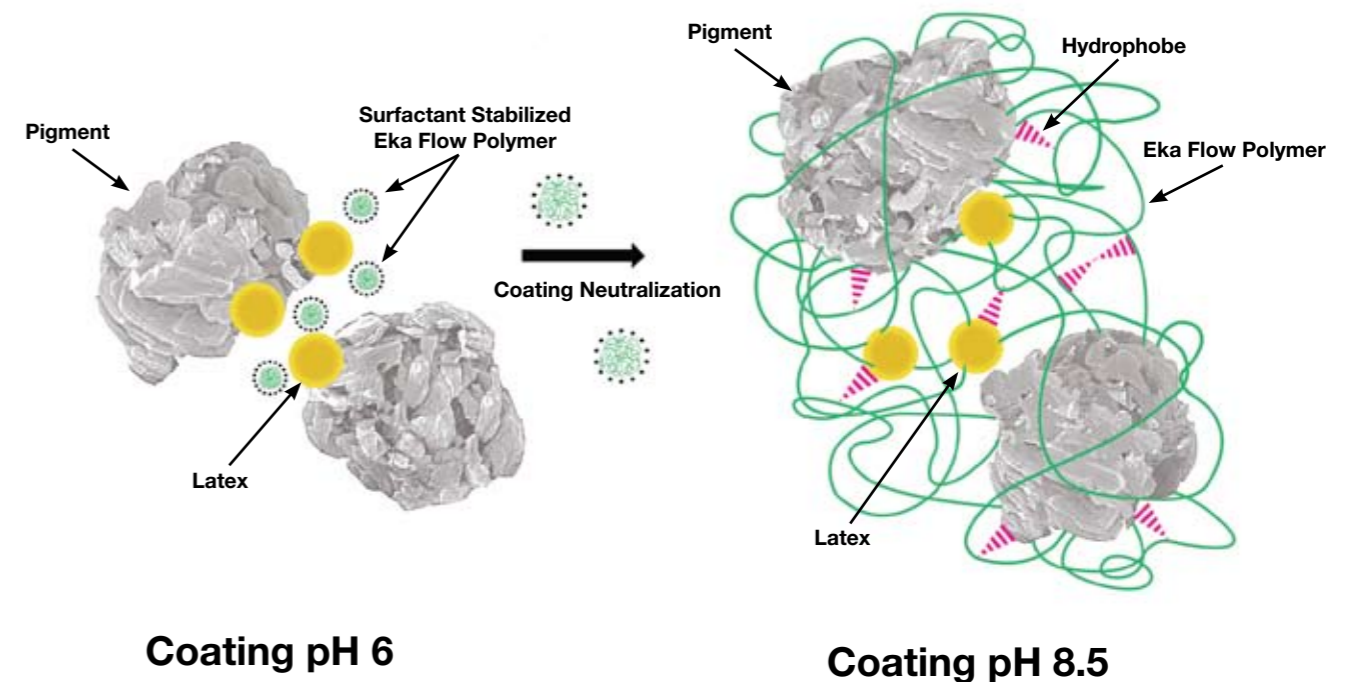
Viscosifying mechanisms include:

- Volume Exclusion
- Polymer Chain Entanglement
- Hydrophobic Group Associations

Primary benefits include:

- Effective and Rapid Viscosity Build
- Maximum Water Retention Development
- Optimized High Shear Rheology

Expanded Eka Flow high molecular weight polymer



Eka Flow portfolio. Optimized coating rheology - tailored for your paper grades.

Product ¹	Low Shear Rheology ⁵	Coating Water Retention ⁶	High Shear Rheology ⁵	Performance Characteristics	Primary Applications	BfR	FDA 176.170 176.180	Solids%
Eka Flow L229²	●●	●●●●●●●●	●●●●●●	<ul style="list-style-type: none"> • A rheology modifier with linear flow • Good blade runnability • Excellent water retention properties 	<ul style="list-style-type: none"> • Coated Board • Premium Grades • Rotogravure • Offset 	✓	✓	25
Eka Flow L237²	●●●	●●●●●●●●	●●●●●●●●	<ul style="list-style-type: none"> • A rheology modifier with structure • Good blade lift • Excellent water retention properties 	<ul style="list-style-type: none"> • Coated Board • Offset 		✓	30
Eka Flow L251³	●●●●	●●●●●	●●●●●	<ul style="list-style-type: none"> • A low associative rheology modifier • Temperature viscosity stability • Good blade runnability • Good water retention properties 	<ul style="list-style-type: none"> • Offset • Premium Grades 		✓	30
Eka Flow L252³	●●●●●●●●	●●	●	<ul style="list-style-type: none"> • A high associative rheology modifier • Excellent high speed blade runnability • Good water retention properties • Maximum coating solids 	<ul style="list-style-type: none"> • Low Solids Coatings (<55%) • Offset • Rotogravure • Premium Grades 	✓	✓	30
Eka Flow L255³	●●●●●●	●●●●●	●●●●●	<ul style="list-style-type: none"> • A low associative rheology modifier with structure • Temperature viscosity stability • Good blade runnability • Good water retention properties 	<ul style="list-style-type: none"> • Coated Board • Premium Grades • Offset 	✓	✓	30
Eka Flow L265³	●●●●●●●●	●●●●	●	<ul style="list-style-type: none"> • A high associative rheology modifier • Excellent high speed blade runnability • Good water retention properties • Maximum coating solids 	<ul style="list-style-type: none"> • Offset • Premium Grades • Rotogravure 	✓	✓	30
Eka Flow L275³	●●●●●●●●	●●●●●	●●	<ul style="list-style-type: none"> • A high associative rheology modifier • Excellent high speed blade runnability • Improved water retention properties • Maximum coating solids 	<ul style="list-style-type: none"> • Offset • Premium Grades • Rotogravure 	✓	✓	30
Eka Flow L283³	●●●●●●	●●●●●●	●●●●	<ul style="list-style-type: none"> • A medium associative rheology modifier • Good blade runnability • Excellent water retention properties 	<ul style="list-style-type: none"> • Offset • Rotogravure 	✓	✓	30
Eka Flow L289³	●●●●●	●●●●●	●●	<ul style="list-style-type: none"> • A low associative rheology modifier with linear flow • Excellent blade runnability • Good water retention properties 	<ul style="list-style-type: none"> • Premium Grades • Offset 	✓	✓	30
Eka Flow HB 300⁴	●●●	●●●●●●●●	●●●●●	<ul style="list-style-type: none"> • A rheology modifier with OBA enhancement properties • Good blade runnability • Excellent water retention properties 	<ul style="list-style-type: none"> • Coated Board • Premium Grades 	✓	✓	25
Eka Flow HB 400⁴	●●●●	●●●●●	●●●	<ul style="list-style-type: none"> • A low associative rheology modifier with OBA enhancement properties • Good blade runnability • Excellent water retention properties 	<ul style="list-style-type: none"> • Coated Board • Premium Grades 	✓	✓	25

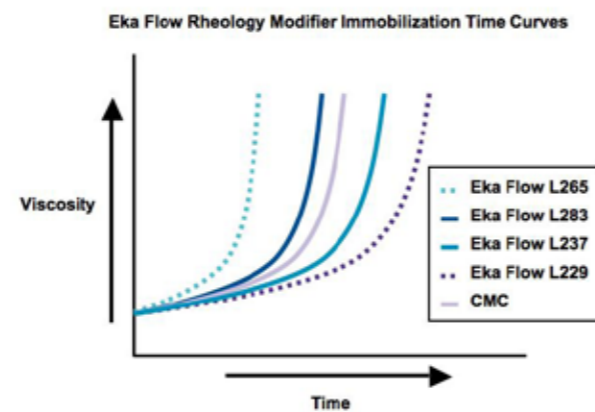
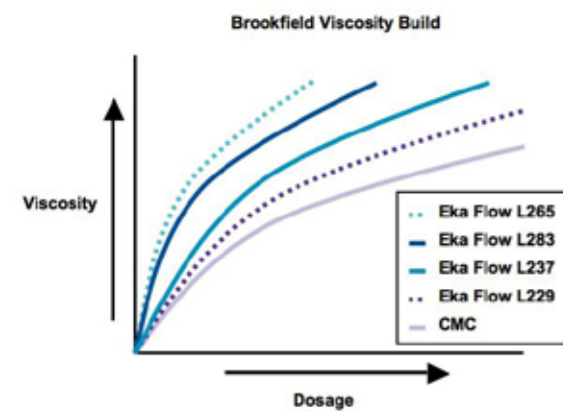
1 - Not all products are available in all regions 2 - ASE, Alkali Soluble Emulsion, shear stable, pH 5 3 - HASE, Hydrophobically Modified Alkali Soluble Emulsion, shear stable, pH 5 4 - Eka Flow HB enhances OBA performance, shear stable
5 - Higher number of dots indicates greater relative product efficiency 6 - Higher number of dots indicates greater relative capacity of the product to retain water in the coating as it is applied

Enhance your paper and board coating operations

To achieve better performance with more versatility, you can count on the Eka Flow portfolio of specialized coating rheology modifiers.

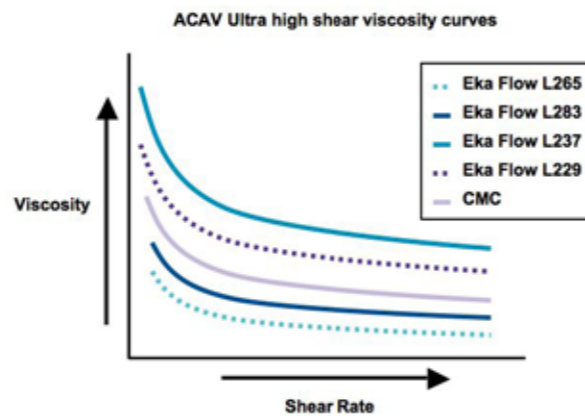
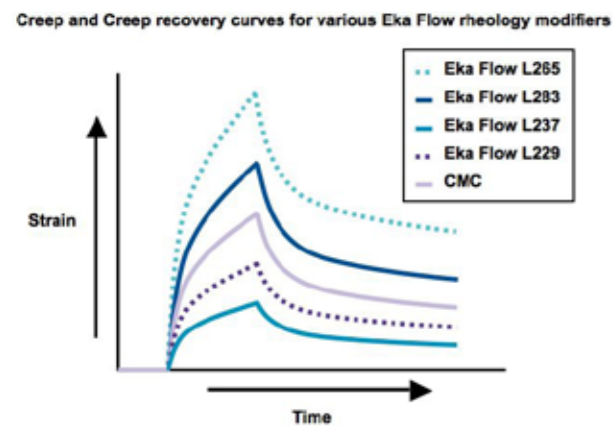
Build and stabilize coating viscosity

Improve coated surface by controlling coating immobilization



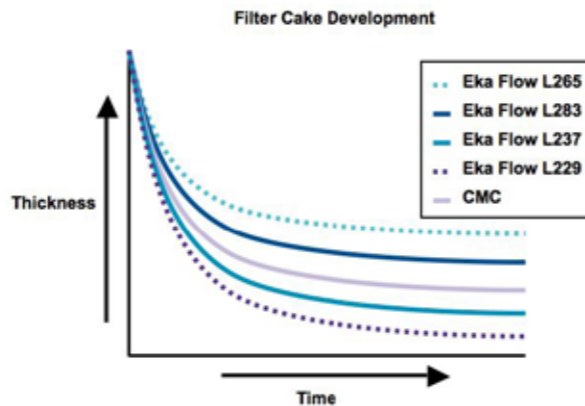
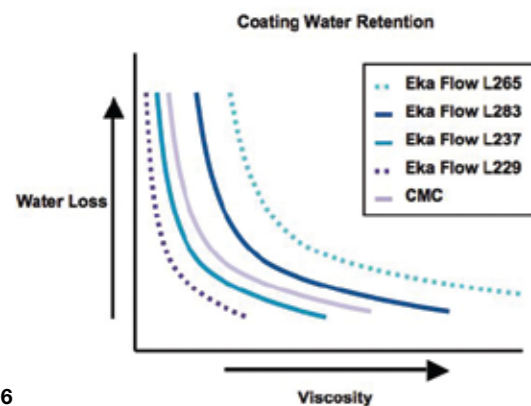
Optimize runnability by adjusting the viscoelastic flow properties of coatings

Maximize coating solids for improved coverage and drying efficiency



Increase water retention for improved runnability

Develop polymer networks that build coating structure



Eka coating additives product portfolio

Eka Flow is one product group in Eka Chemicals Coating Additives offering. If you would like to learn more about any of the products listed below, please contact your Eka representative or visit www.eka.com.

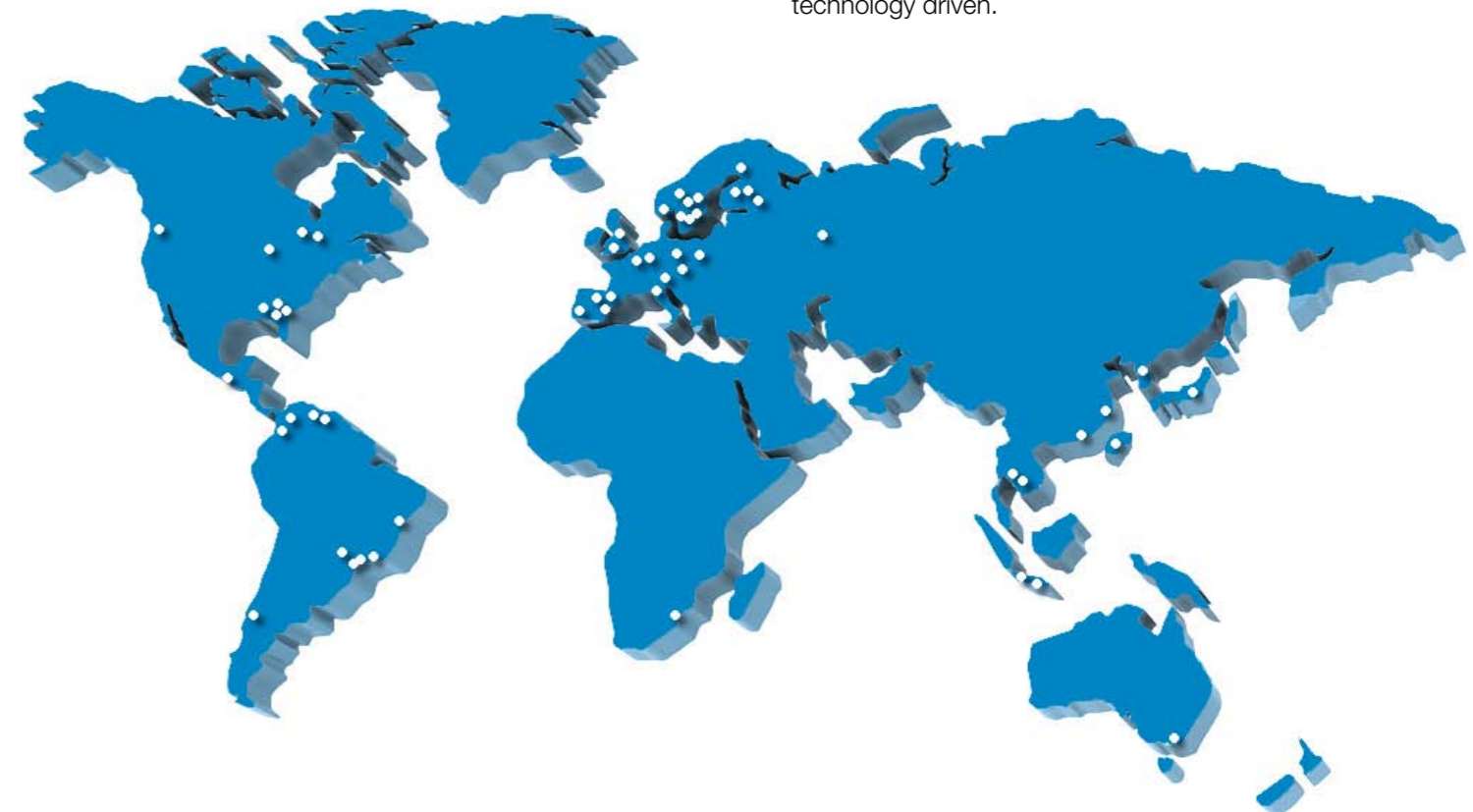
- Eka Flow** - Rheology Modifiers
- Eka AZC, Eka PZC, Eka RC** - Crosslinkers/Insolubilizers
- Eka LC** - Coating Lubricants
- Structurecote®** - Modified Starch Co-Binder
- Eka Sperse** - Pigment/Coating Dispersants
- Eka CC** - High Solids Coating Flow Aids
- Eka DC** - Coating Defoamers
- Eka Stat** - Static Electricity Dissipator

Eka Chemicals product stewardship commitment

Eka Flow portfolio of rheology modifiers is formulated to meet or exceed environmental performance requirements. Most products are in compliance with BfR and FDA regulations for food grade applications. They are produced regionally to meet the highest standards of performance.

Eka is also dedicated to the development of innovative products and technical support. Our state-of-the-art application laboratories are available to help you solve your most demanding application challenges. We have an advanced paper coatings laboratory with technicians ready to provide the best solution to meet your mill's needs. Their resources include pilot plant coating capabilities with a high-speed Cylindrical Laboratory Coater, a Controlled Stress Rheometer and a ACAV Ultra High-Shear Viscometer.

Eka has manufacturing operations in locations around the globe and regional technical support. Put us to work for your mill and you'll see we are customer focused and technology driven.



Eka Flow portfolio of optimized coating rheology modifiers can be tailored to meet the demands of different paper grades. Eka Flow is one product group in Eka Chemicals Coating Additives offering.

Eka Chemicals, with around 2,570 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 specialty chemicals to the pharmaceuticals industry, water treatment, the electronics industry etc.

www.eka.com

Eka® and Structurecode® are registered trademarks of Eka Chemicals in some countries worldwide.

eka