Coatings technology overview
Unique chemistry and unparalleled expertise

Working with formulators and coatings users in the industry for decades, Eastman has developed, adapted, and perfected unique and specialized chemistries for a wide variety of coatings applications, including:

**Polyesters**
- Eastman Tritan™ copolyester
- Eastman AG™ polymers
- Eastman Tetralash™ protective resin systems

**Cellulose esters**
- Cellulose acetate (CA)
- Cellulose acetate butyrate (CAB)
- Cellulose acetate propionate (CAP)

**Solvents**
- Ketones
- Esters
- Glycol ethers
- Glycol ether esters
- Ether esters
- Alcohols

**Coalescing aids and additives**
- Eastman Texanol™ ester alcohol
- Eastman Optifilm™ enhancer 300
- Eastman Optifilm™ enhancer 400
- Eastman Optifilm™ additive OY1001
- Eastman ESI solvents

**Specialty and functional amines**
- Eastman Vantex™-T neutralizing amine additive
- Eastman Advantex™ neutralizing amine additive

Coating technology and the chemistry of collaboration

In a competitive global coatings market, the difference between merely surviving and thriving can often lie in the efficacy of collaboration between suppliers, manufacturers, formulators, brands, and material experts. Eastman has a long history of effectively and proactively collaborating with paint formulators and their customers—an unprecedented level of teamwork that has resulted in proven success for many coatings segments and applications. From fundamentals to formulation to final solutions, Eastman has the technical and marketing resources and expertise to help coatings innovators and end users alike achieve more.
A robust technology network

Eastman’s global technology network integrates a committed cadre of chemists, engineers, scientists, and technical experts focused on delivering solutions that help our customers achieve more. By applying an in-depth knowledge of chemistry and using a multidisciplinary approach, the Eastman technology network can address the industry’s unmet needs with achievable technical solutions.

Product Development
Eastman has a successful history of creating high-performing products that enhance coatings. Our Product Development team creates new additives, monomers, and polymers to address our customers’ specific application and performance needs.

- Further develops, tests, modifies, and optimizes newly created materials
- Utilizes thorough knowledge of structure-property relationships
- Uses customer input to create successful prototype materials
- Evaluates proof of concept criteria to demonstrate performance results
- Completes concept development and screening processes
- Tests and optimizes materials across Eastman’s technology organization

Applications Research
Equally fueled by our quest for innovation and our goal to better understand the markets and industries we serve, the Eastman Applications Research team is the foundation of our technology organization.

- Applies fundamental chemistry concepts to address industry and market needs
- Investigates fundamental chemistry, physics, and engineering ideas that can positively impact coatings applications
- Focuses on modeling and synthetic techniques to design new molecules
- Uses analytical and applications development capabilities to characterize structure-process-property relationships
- Designs test methods to validate hypothesized chemical and physical interactions
- Identifies potential failure modes via root cause analysis

Applications Development
Eastman’s Applications Development team helps our customers win in the market by connecting unmet needs with the right technical solutions. This group modifies material compositions, formulations, and processing to optimize performance.

- Collaborates with formulators and end users to optimize performance
- Enables delivery of solutions through shared, crucial insights
- Conducts applications testing against critical-to-quality (CTQ) targets
- Contributes to scale-up processes with focus on customer requirements
- Combines fundamental application development insights with applied research

Technical Service
Driven to provide our customers with world-class technical support, the Eastman Technical Service team works closely with formulators as they consider incorporating our commercial offerings into their formulations.

- Leverages Eastman knowledge and insights to help formulations achieve performance goals
- Offers starting point formulations and competitive benchmarking data
- Delivers personalized attention based on formulation and end-use requirements
- Recommends application equipment and procedures
- Uses root cause analysis to address formulation or performance concerns
- Offers timely, efficient, and accurate consultation and collaboration

At Eastman, the integrated functions of Product Development, Applications Research, Applications Development, and Technical Service are fueled by customer engagement. We remain committed to interacting across the value chain to gain insights, address market challenges, and help our customers win in the market by delivering solutions through collaborative chemistry. In the end, our success is realized only when our coatings customers are able to achieve their goals.
Company-wide collaboration… worldwide

To maximize collaboration results, all facets of the Eastman technology group connect seamlessly with multiple internal functions that support and inform the technical work we do. As a result, we ply a company-wide global network that is committed to supporting the efforts of our research, development, and technical teams.

Regulatory
Eastman understands regulatory compliance is a complicated and evolving challenge for our customers and the market.
- Recognizes and adapts to ever-shifting regulatory landscape
- Works closely with technology teams to address regulatory impacts to coatings market
- Focuses on education and advocacy to connect impacts to customer performance requirements and raw material needs

Manufacturing
With global manufacturing sites, Eastman has a successful track record of providing customers with a consistent, reliable supply.
- Leverages unique manufacturing capabilities to enhance the technology group’s abilities
- Maximizes world-class technology platforms across a global network of sites
- Adapts value chain collaborations to fully utilize manufacturing abilities to deliver solutions
For example, from our cellulose esters and acetyl manufacturing streams, Eastman develops material solutions for architectural, transportation, metal-packaging, and display coatings. Our team also plays our polyester manufacturing expertise to innovate polyester resin solutions for transportation, metal packaging, industrial, and protective applications.

Customer-facing marketing
In addition to working with internal manufacturing teams and regulatory experts, our technology group collaborates with a sophisticated marketing organization that has its finger on the pulse of the very diverse coatings market.
- Prioritizes research and development projects
- Relies on insights from customer and industry engagement
- Sees and acts upon emerging trends
- Shares market understanding to increase effectiveness of integrated teams
- Focuses on addressing market needs
Reaching out to value-added resources

While we know firsthand the importance of having an integrated internal technology network, we also recognize the value of connecting our technology team to external resources. These connections allow us to expand our knowledge, resources, and assets as we collaborate across the value chain to help our customers achieve more. At Eastman, our mission is to generate solutions that address the coatings market’s challenges and move the industry forward.

**Government research labs**

In our work with government-based agencies, we are able to leverage expertise in various disciplines, including measurement science, standards, and related technologies.

- Leverage findings from joint projects
- Offer critical measurement solutions
- Advance speed-to-market goals

**Universities**

With a focus on investing in the future and expanding our resources, the Eastman Technology team engages with academia to collaborate with researchers from diverse disciplines.

- Focus on engineering, technology, chemistry and materials science programs
- Increase experiential education
- Accelerate speed-to-market for technologies and materials
- Collaborate in early stages of research to feed basic and innovation

**Industry consortia**

Through collaboration with industry consortia, our technology network has access to expanded capabilities.

- Gain access formulation and testing capabilities
- Utilize case studies from various industries and disciplines
- Understand global market challenges and business practices
- Address regionally-specific market needs

**Market research firms**

Beyond partnering with government agencies and state universities, we also partner with private firms.

- Access well-executed and credible market research
- Understand coatings needs by market and application
- Identify industry preferences
- Optimize intelligence to create specialized solutions

**Value-chain engagement**

Only when we truly understand end-user needs can we deliver differentiated coatings solutions. Collaborating across the value chain is Eastman’s preferred method to achieve this understanding.

- Work in partnership across the industry
- Understand connections between global trends and industry needs
- Collaborate with materials experts, formulators, OEMs, asset owners, applicators, influencing organizations
- Align chemistry, formulation and applications expertise to deliver breakthrough solutions

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**External collaboration partners**

- Independent, specialized laboratories
- Original equipment manufacturers
- Leading universities
- Governmental institutions
- Paint formulators
- Industry consortia

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Summary

Global market insights and regulatory trends

Because our technology team collaborates with insightful market research teams inside and outside Eastman, our customers gain the intelligent edge that allows them to anticipate market changes and emerging trends. With help from our knowledgeable regulatory experts who follow and anticipate changes in compliance standards, Eastman’s coatings team is able to share timely information with our customers so we can be proactive when responding to new regulatory rules. Our customers benefit from the Eastman regulatory team’s use of sound science to advocate for practical solutions that balance a wide range of interests.

World-class assets and integrated technology platforms

Relying on our integrated global network of manufacturing, research, and business sites, Eastman’s technology experts have a variety of resources at their disposal as they collaborate across the industry to develop solutions for the toughest challenges facing the coatings market. They invest time and resources to maximize our technology platforms and deliver innovative and attractive solutions for multiple market applications.

Coatings improve products. Together, we improve coatings.

Thanks to our chemistry expertise, we produce raw materials and ingredients that enable formulators to create coatings that enhance the performance of finished products. By utilizing the capabilities of our internal and external networks, Eastman can fuel collaboration efforts with the advantage of getting solutions to market faster. By applying innovative approaches that lead to practical solutions, we’re poised to help coatings formulators reach their formulation, productivity, and sustainability goals.

As we engage with formulators, original equipment manufacturers, and others across the value chain, we want to learn as much as we want to share our knowledge. We value our industry relationships because we can accomplish more when we work together. Collaboration isn’t just a buzzword at Eastman; it’s the way we do business. Our business model is built on internal and external collaboration—to engage in mutually beneficial partnerships. The ultimate goal is to discover new solutions that lead to brand enhancement, product differentiation, and increased market share for our customers. It’s what we mean when we say, “The results of insight.”

Coatings markets served

Architectural
Industrial
Packaging
Protective
Transportation
Wood coatings
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