

EASTMAN

A resin for every reason.

Performance-matched plastics for appliances.



More reasons than ever to differentiate your products.

The ongoing growth of the competitive household appliance market drives brand owners, product designers and manufacturers to discover innovative ways to satisfy consumers — and differentiate products and brands.

Eastman Chemical Company is a leading supplier of clear plastic resins that inspire innovation. These performance-matched resins can help create value-added components that enhance the value of small appliances, floor care equipment and major appliances.

Select the attributes that contribute to your products' aesthetics, performance and lifetime value.

Eastman offers a variety of clear polymers, each with a different balance of attributes that are most desirable for your market segment.

- Clarity
- Toughness
- Chemical resistance
- Processability
- Hardness
- BPA-free
- Tintability
- Surface gloss
- Strength
- Heat resistance
- Economics
- Design flexibility

Eastman Tritan™ copolyester, Eastar™ copolyesters and DuraStar™ polymers are featured here, but many other options and special formulations are available (see Pages 4 and 5 for a more complete portfolio). For more information about selecting polymers for your specific needs, visit www.eastman.com/Markets/Appliances or call 1-800-EASTMAN (1-800-327-8626).



Big opportunities for small appliances.

New Eastman Tritan™ copolyester is a significant and welcome breakthrough that builds on the versatility of our heritage copolyesters — including clarity, toughness and chemical resistance — to deliver greater heat resistance and the potential for easier processability of small appliance components.

Eastman Tritan™ offers drop-in replacement for many polycarbonate (PC) injection molds, with minor or no adjustments. Tritan™ delivers toughness and impact resistance comparable to PC, but with these clear advantages:

- Greater hydrolytic stability and chemical resistance resists degradation and stress cracking in hot, wet dishwasher environments, even with cleaning solutions, surfactants and alkaline cleaning agents.
- Lower levels of residual stress without a separate annealing step improves injection molding rates as well as the durability of the molded articles.
- Lower density increases number of parts per pound of polymer.
- Tritan is a new standard for dishwasher durability.

Plus, Eastman Tritan™ is BPA-free, so it can offer unique marketing opportunities compared with products made with PC.



"We place an emphasis on using the highest-quality materials and components for our Vita-Mix® products, and we had been looking for a viable BPA-free solution for a number of years. Tritan™ is the only material able to deliver this advantage while maintaining the levels of impact resistance the containers must provide."

John Barnard, CEO of Vita-Mix Corporation

Meet the growing demand for floor care products with a clear view of cleaning in action.

Today's consumers demand to see the action that makes dirt and stains disappear from floors and carpets. So clear, tough, chemical-resistant polymers are a mainstay of innovative floor care equipment design.

Clearly a need for toughness and chemical resistance.

A clear view of cleaning action can turn hazy if chemicals attack the plastic parts. Over time, common household cleaning solutions may create tiny hairline cracks in a clear part, creating a frosted appearance. More important, once the material has deteriorated in this way, stress or impact during use can result in breakage.

Eastman Chemical Company offers some of the most popular — and durable — clear polymers available today. Each has a balance of attributes that stand up to the demanding floor care industry — and all are free of BPA, halogens and orthophthalate plasticizers.



Eastar™ copolyesters set the standard — from the floor up.

Eastar™ copolyester has long been the material of choice for clear or tinted injection-molded parts such as chemical reservoirs, floor and upholstery nozzles, lenses, and dirt containers. The physical attributes of Eastar copolyesters — outstanding chemical resistance, clarity and impact resistance — ensure clear floor care components will remain clear and free of haze, crazing or cracking through years of use.

Parts made using Eastar™ copolyesters have unrivaled clarity and gloss, but they offer more than just aesthetic appeal. The material's toughness, superior chemical resistance and outstanding resiliency mean parts maintain their looks and performance through years of use.

Eastar™ copolyester also lends itself to various types of fabrication techniques, including sonic welding, spin welding and adhesion. Eastar also is suitable for clear, tinted or molded-in color applications.

Comparison guide of Eastman™ plastics

Eastman™ Specialty Copolyester	Clarity	Toughness	Chemical Resistance	Heat Resistance	Other Properties
Eastar™ Copolyesters	High	High	High	Moderate	Food-contact-compliant formulations
DuraStar™ Polymers	Very high	High	High	Moderate	Good flow; dries quickly
Eastman Tritan™ Copolyesters	High	High	High	Moderately high (compared to polycarbonate [PC])	Drop-in for most PC molds
Eastman Tenite™ Cellulosics	High	High	High	Moderate (lower plasticizer yields higher heat resistance)	Good handling properties

DuraStar™ polymers make a clear case for durability.

DuraStar™ polymers are one of our clearest families of products. They beautifully combine clarity with enhanced impact and chemical resistance, making them a favorite, not only for floor care equipment, but also for major appliance components, displays, toys, sporting goods and other consumer products.

DuraStar™ is a very versatile polymer, and molders quickly discover that it is a very forgiving material with a wide processing window. In many applications, DuraStar polymers offer the advantages of faster cycle times, minimal drying and little, if any, need for retooling. All make DuraStar a clear choice for optimal throughput.



Eastman™ copolyesters provide major advantages for your appliance components.

A clear view inside of refrigerator compartments, ice buckets, washer and dryer doors, and many more appliances helps differentiate some of the most successful appliance manufacturers today.

Clear polymers from Eastman Chemical Company play a major role in some of these success stories. In applications that were traditionally too challenging for clear plastics, manufacturers have discovered that Eastar™ copolyesters and DuraStar™ polymers are tough enough to stand up to the daily grind of repeated cycles, and the high-impact reality of a cold, hard world.

The base clarity of Eastar™ copolyesters and DuraStar™ polymers also permits limitless combinations of water-clear and tinted components to satisfy consumer demands.



A major commitment to innovation.

Eastman Chemical Company has a legacy of leadership in clear plastic resin technologies that meet special needs — and has made that leadership available to the appliance industry for many years.

Successful appliance manufacturers have found that, for innovative designs, Eastman can provide the greatest value if it is involved early in the design process. Addressing the design, materials, evaluation, prototyping, manufacturing assembly and end-use testing during a product's conceptual stage is time-efficient and cost-effective. This early involvement also can eliminate costly surprises, shorten product development and commercialization cycles, and result in quality, economical parts — all critical to maintaining a competitive advantage.

You can see many examples of how our commitment can enhance your innovation by visiting our Website. From there, you also can access the Innovation Lab to see exciting and innovative applications of Eastman™ polymers.

To learn more, visit www.eastman.com or call 1-800-EASTMAN (1-800-327-8626).



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