Molecular – Advanced – Enhanced recycling: They are terms referring to recycling technologies.

**What is PRT?**

1. **Waste feedstock**
   - Mix of hard-to-recycle polyester plastic waste

2. **PRT**
   - Feedstock is cleaned via mechanical purification process.
   - PRT (depolymerization) unzips waste plastics into their molecular building blocks ("monomers").

3. **High quality final products**
   - Monomers are used to manufacture new plastics for any application, without sacrificing the quality.

4. **Durable food containers, small appliances, water bottles**

**PRT has among the highest % of material recovery rates amongst chemical recycling technologies.**

83% of the plastic put on the market is NOT recycled.

**PRT does not turn plastic waste into fuels.**

**PRT environmental impact**

PRT allows more sustainable plastics processing than virgin feedstock:

>30% less greenhouse gas emissions.

Our plant in France will be able to potentially reduce them up to 80%. Scan here Eastman's life cycle assessment (LCA) summary report.

**Polyester Renewal Technology fully supports six key principles**

1. **REDUCE, REUSE, RECYCLE**
   - Reduces the need for virgin plastics and fossil feedstocks; recycles unrecyclable polyester waste infinitely without degradation.

2. **MATERIAL CIRCULARITY**
   - Enables plastic-to-plastic recovery at a very high yield. The recycled output is indistinguishable from material produced from virgin feedstocks.

3. **ENVIRONMENTAL AND SOCIAL IMPACT**
   - Emits less than fossil route; supports safe conditions for our employees and site communities.

4. **COMPLEMENTARY TO MECHANICAL RECYCLING**
   - Complements other recycling solutions in the recovery of hard-to-recycle polyester plastic waste.

5. **ECONOMIC VIABILITY**
   - PRT is proven technology and can be economically viable at scale thus contributes to solving the EU’s plastic waste crisis.

6. **TRANSPARENCY**
   - Eastman leverages multi-stakeholder certifications that are third-party audited; this is key to ensuring transparent and credible claims.

Did you know?

In Europe...

- **53.6 m** PLASTIC CONSUMPTION
  - **29.5 m** COLLECTED PLASTIC WASTE
  - **12.4 m** RECYCLING
  - **10.2 m** GOES TO RECYCLING PLANTS
  - **6.9 m** LANDFILL
  - **5.6 m** RECOVERED AND PUT BACK IN PRODUCTION


Plastics are essential everyday materials in packaging, construction, medical, automotive, electronic industries...

Eastman announced its plan to invest $1 billion in a material-to-material molecular recycling facility in France.

If it would use Eastman’s polyester renewal technology (PRT) to recycle over 200,000 tonnes annually of hard-to-recycle polyester plastic waste that is currently being incinerated.

The first phase is scheduled to be completed in 2026.

Eastman announced its plan to invest $1 billion in a material-to-material molecular recycling facility in France.

If it would use Eastman’s polyester renewal technology (PRT) to recycle over 200,000 tonnes annually of hard-to-recycle polyester plastic waste that is currently being incinerated.

The first phase is scheduled to be completed in 2026.

Eastman announced its plan to invest $1 billion in a material-to-material molecular recycling facility in France.

If it would use Eastman’s polyester renewal technology (PRT) to recycle over 200,000 tonnes annually of hard-to-recycle polyester plastic waste that is currently being incinerated.

The first phase is scheduled to be completed in 2026.

Eastman announced its plan to invest $1 billion in a material-to-material molecular recycling facility in France.

If it would use Eastman’s polyester renewal technology (PRT) to recycle over 200,000 tonnes annually of hard-to-recycle polyester plastic waste that is currently being incinerated.

The first phase is scheduled to be completed in 2026.

Eastman announced its plan to invest $1 billion in a material-to-material molecular recycling facility in France.

If it would use Eastman’s polyester renewal technology (PRT) to recycle over 200,000 tonnes annually of hard-to-recycle polyester plastic waste that is currently being incinerated.

The first phase is scheduled to be completed in 2026.

Eastman announced its plan to invest $1 billion in a material-to-material molecular recycling facility in France.
The path to zero waste - 
the value of chemical recycling

PRT compared to other material-to-material recycling technologies

What’s needed in Europe?

PRT and other innovative recycling technologies need to be supported by EU rules because they are essential to achieve true circularity of materials, reduce EU’s dependency on natural resources and move towards zero waste.

Effective collection and sorting of plastics waste, so waste is secured to a location where it can be treated in the most sustainable manner and where value can be extracted.

The acceptance of mass balance to calculate and trace recycled content through the value chain and for enabling recycling at scale.

Importance of mass balance for tracking recycled content in products

Mass balance chain of custody method

HOW IT WORKS

It is a well-known chain of custody method which allows continued use of the existing infrastructure to bring advanced recycling to scale. Without mass balance, duplication of infrastructure is required (plants, storage, logistics, etc.), which dramatically increases environmental footprints, timelines, making it cost-prohibitive to get to a large scale.

To ensure transparency and credibility it should be verified by third-party certification.

Method used to record how much recycled feedstock is used in plastics manufacture.

Mass balance method is standardized, verified and regularly audited under established certification systems such as ISCC PLUS and others.

Check out our position paper

For more information go to eastman.com/advocacy or contact: Fatma Sahin, director, government affairs, EMEA, at Fatma.sahin@eastman.com.

ABOUT EASTMAN

Founded in 1920, Eastman is a global specialty materials company that produces a broad range of products found in items people use every day. With the purpose of enhancing the quality of life in a material way, Eastman works with customers to deliver innovative products and solutions while maintaining a commitment to safety and sustainability. The company’s innovation-driven growth model takes advantage of world-class technology platforms, deep customer engagement, and differentiated application development to grow its leading positions in attractive end markets such as transportation, building and construction, and consumables. As a globally inclusive and diverse company, Eastman employs approximately 14,000 people around the world and serves customers in more than 100 countries. The company had 2021 revenues of approximately $10.5 billion and is headquartered in Kingsport, Tennessee, USA. In Europe, Middle East and Africa (EMEA), Eastman employs approximately 2100 and is present in 10 countries. EMEA accounted for 26 percent of total sales revenue in 2021.