

EASTMAN



Eastman rosin products

**Resins from
renewable
resources**

Resins from renewable resources for adhesion, wetting, and viscosity control

Eastman rosin products bring the strength and renewability of nature to the market. Primarily sourced from living pine trees, Eastman rosin-based products deliver value to the following markets:

- Adhesives and sealants
- Chewing gum
- Coatings and inks
- Household and personal care
- Rubber and plastic compounding
- Cement and asphalt modification
- Soaps and surfactants

Rosin and its derivatives offer useful properties in numerous applications to deliver specific adhesion and improved wetting characteristics to various substrates as well as added viscosity control. Through sustainable solutions such as Eastman rosin-based products, our portfolio is helping drive customers' capabilities and sustainability goals.



Did you know . . .

- Because living pine trees pull CO₂ from the air, rosin products pose a favorable carbon footprint compared to products from nonrenewable feedstocks?
- The majority of Eastman rosin-based products contain more than 90% renewable content?
- Eastman is working with customers to conduct Life Cycle Assessments (LCAs) to better understand how Eastman products support customers' sustainability goals?

Eastman rosin esters for low CO₂ footprint formulations

Renewable content

Eastman rosin resins enable you to formulate products with high renewable content because they are based on gum rosin from living trees. The pine trees are grown for about 25 years then harvested for use in the paper industry, and the land is replanted. In addition to the gum rosin, Eastman glycerol esters contain glycerol from renewable resources. The renewable carbon content of our rosin resins was determined from theoretical calculations or directly measured by a third-party laboratory using ASTM methodology.

% Renewable content*



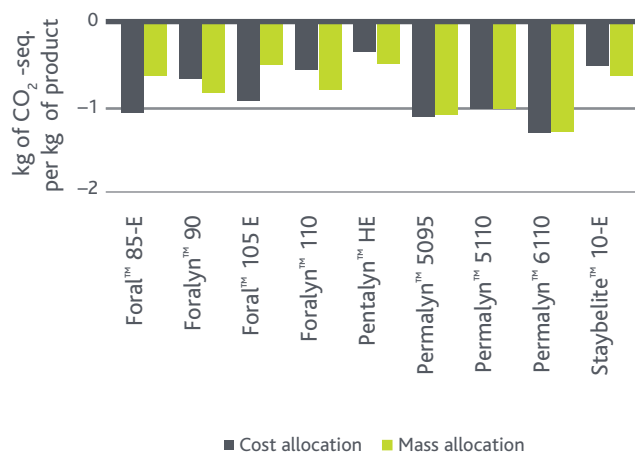
*Renewable carbon content according to ASTM-D6866

Reduced carbon footprint

Rosin derivatives are unique renewable raw materials because only limited postharvest processing is required to convert the harvested gum dip into useful products. Therefore, Eastman rosin products are carrying the sequestered CO₂ right into your adhesives and coatings. Eastman has completed LCA to quantify the net carbon footprint of Eastman rosin products from cradle to gate.

Depending on the resin content of your product, Eastman rosin esters can have a significant impact on its CO₂ footprint. For every kg of Eastman rosin product used, a weighted average amount of between 830 and 850 grams of CO₂ has been sequestered. If you are interested in developing carbon footprint data for your formulated product containing an Eastman rosin resin, we will be glad to provide you more details on our LCA.

Net CO₂ sequestered Cradle-to-gate LCA data





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