

Technical Data Sheet

Staybelite™ Ester 5-E Resin

Applications

- Adhesives/sealants-b&c
- Bookbinding
- Caps & lids non-food contact
- Carpet construction
- Case & carton sealing closings
- Commerical printing inks
- Film modification
- Labels non food contact
- Packaging component films
- Packaging components non food contact
- Packaging tape
- Paints & coatings
- Polymer modification
- Protective coatings
- Road markings
- Roofing ingredients
- Solder flux
- Specialty tape
- Tape non food contact
- Tires
- Wax ingredients
- Wire/cable

Key Attributes

- Excellent chewing gum base
- Excellent resistance to oxidation
- Light color
- Low odor
- Medium softening point
- Thermoplastic hydrogenated resin
- Wide solubility and compatibility range

Product Description

Staybelite™ Ester 5-E Resin is a pale, medium-hard, thermoplastic synthetic resin that has excellent resistance to oxidation, discoloration, and other properties affected by ageing. It is the glycerol ester of partially hydrogenated rosin specially processed to yield a low-odor, low-acid-number product. These and other outstanding properties make it particularly useful as a modifier of masticatory ingredients used in chewing gum bases.

Typical Properties

Property	Typical Value, Units
General	
Softening Point	
Hercules drop method	86 °C
Color, Gardner ^a	6
Acid Number (mg KOH/g)	7
Density	
@ 25°C	1.06 kg/dm ³
Description, Base Resin	Partially Hydrogenated Rosin

^a50% resin solids in toluene

Compatibility and Solubility

Low odor, low acid number, pale color, resistance to oxidation, thermoplasticity, inherent tackiness; soluble and compatible with a wide variety of materials.

Compatible at all ratios, or in limited but practically useful proportions, with natural and synthetic resins, waxes, natural and synthetic elastomers, vinyl polymers and copolymers, EVA copolymers, nitrocellulose, ethylcellulose.

Soluble in esters, ketones, higher alcohols, glycol ethers, aliphatic hydrocarbons, aromatic hydrocarbons, chlorinated hydrocarbons.

Packaging

Staybelite™ Ester 5-E Resin is supplied in either flaked or solid form. Flaked material is packed in polyethylene bags of 25 kg net, and supplied on shrink-wrapped pallets of 40 bags (1000 kg) each, from Eastman facilities in The Netherlands and from warehouses located in Europe.

Staybelite™ Ester 5-E Resin in solid form is supplied in fiber drums with a net weight of 220 kg, on pallets containing 4 drums each, from Eastman production facilities in The Netherlands and from warehouses located in Europe.

Resin in solid form is less prone to oxidation.

Staybelite™ Ester 5-E Resin Bulk is supplied in bulk containers, from Eastman production facilities in The Netherlands. The bulk containers are electrically traced (130 – 160°C), insulated and inerted.

Storage

Due to the thermoplastic behavior, pastillated and flaked resins may fuse, block or lump. This can be accelerated under any of the following conditions: 1) above ambient temperature, 2) prolonged storage, 3) pressure, e.g., stacking pallets, or a combination of these conditions. This is particularly applicable for low softening point resin grades.

In order to maintain the flake or pastille shape, we therefore recommend storing the material in a temperature-controlled area, be careful with stacking material or applying pressure and preventing prolonged storage.

It should be noted that lumping does not have a negative impact on the product specifications. Due to the nature of the product, claims regarding lumping cannot be accepted.

Resins are prone to gradual oxidation, some more so than others. This could result in darkening and/or it could have an adverse effect on the solubility of the resin in organic solvents or on its compatibility with polymers. Accordingly, it is recommended that strict control of inventory be observed at all times, taking care that the oldest material is used first.

Staybelite™ Ester 5-E Resin material will remain within product specification limits, as mentioned under the heading "Product Specifications", for a period of at least six months after shipment from Eastman production facilities in The Netherlands for pastillated material, twelve months for solid material and one month for bulk material, provided storage conditions outlined in this data sheet are observed. However, as we can neither anticipate the conditions under which the resin is processed nor the end use applications for which it is used, we recommend that the material be tested upon receipt.

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