# FORAL™ AX-E Fully Hydrogenated Rosin



FORAL™ AX-E fully hydrogenated gum rosin is a thermoplastic, acidic resin produced by hydrogenating rosin to an exceptionally high degree. It is the palest, most highly stabilized rosin commercially available from Synthomer. Compared with STAYBELITE™ resin-E partially hydrogenated rosin, a hydrogenated rosin long established and widely used for its pale color and high oxidation resistance, FORAL AX-E has better initial color and color retention, and even greater resistance to oxidation. It is especially indicated as the tackifier and resin modifier in solvent adhesives and hot-melt applied coatings and adhesives that must excel in these properties. It is also used in UV cured acrylics to improve adhesion to low surface energy substrates.

- Alcohol-soluble
- Compatible with UV acrylic adhesives
- Excellent resistance to oxidation
- High acid number
- Improved adhesion to low surface energy substrates
- Medium softening point
- Thermoplastic hydrogenated resin
- Very light color

For further information regarding this product please refer to:

Synthomer Adhesive Technologies

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| Property | Typical Value | Unit | Method[1] |
|---|---|---|---|
| Description, Base Resin | Hydrogenated Gum Rosin | | |
| Ring and Ball Softening Point | 70 | °C | ASTM E 28 |
| Color, Hunterlab L | 97 | | 50% solids in toluene |
| Color, Hunterlab b | 8 | | 50% solids in toluene |
| Acid Number | 161 | mg KOH/g | ASTM D 465 |
| Refractive Index at 100°C | 1.4952 | | |
| Abietic acid, UV | 0.05 | % | |

[1] internal method based upon the specified norm

## Applications

Caulks and Sealants, Packaging specialities, Carpet, Tapes, Other adhesives , Speciality tapes, Wire and cable, Assembly, Packaging, Graphic inks, Film Modification, Hygiene Adhesives, Plastic Modification, Other coatings, Roadmarking, Roofing

## Compatibility and Solubility

Exceptionally pale color, excellent heat stability and color retention, excellent resistance to oxidation. Wide solubility and compatibility, low odor. Compatible at all ratios, or in limited but practically useful proportions, with natural and synthetic waxes, resins, rubber, drying and non-drying alkyds, blow castor oil, ethylcellulose, synthetic elastomers, thermoplastic polymers and copolymers.
Soluble in alcohols, esters, ketones, hydrocarbons, chlorinated solvents, mineral oils. Insoluble in water.

Solubility Parameters, 50% resin concentration. 7,8- 9,5 in Class I solvents - weakly hydrogen-bonded; 7,4-10,6 in Class II solvents - moderately hydrogen-bonded; 9,5-12,7 in Class III solvents - strongly hydrogen-bonded.

## Packaging

FORAL™ AX-E fully hydrogenated rosin is pastillated and packed in polyethylene bags of 25 kg net, and supplied on shrink-wrapped

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pallets of 40 bags (1000 kg) each, from Synthomer facilities in the Netherlands and from warehouses located in Europe.

## 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) storage above the initial glass transition temperature of the product 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.

FORAL™ AX-E fully hydrogenated rosin material will remain within product specification limits, as mentioned in the sales specification sheet, for a period of at least twelve months after shipment from Synthomer"s production facilities in the Netherlands, 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.

## Comments

Properties reported here are typical of average lots. Synthomer makes no representation that the material in any particular shipment will conform exactly to the values given.

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