

Technical Data Sheet

Regalite™ S5100 Hydrocarbon Resin

Applications

- Adhesives/sealants-b&c
- Bookbinding
- Carpet construction
- Case & carton sealing closings
- Casting wax
- Commercial printing inks
- Hygiene adhesives
- Labels non food contact
- Polymer modification
- Protective coatings
- Specialty tape
- Tape non food contact
- Tires

Product Description

Regalite™ S5100 Hydrocarbon Resin is an unique partially hydrogenated water-white inert thermoplastic resin derived from petrochemical feedstock. This resin is especially designed as a tackifier in hot melt adhesives based on SIS and SBS block copolymers, where it provides superior room temperature cohesion combined with very low adhesive viscosity.

Typical Properties

Property ^a	Test Method ^b	Typical Value, Units ^c
General		
Ring and Ball Softening Point	ASTM E 28	100 °C
Color, Gardner ^d	ASTM D 6166	<1
Density @ 25°C		1.03 kg/dm ³
Cloud Point ^e MMAP		60 °C
Molecular Weight ^f		
M _n		600
M _w		900
M _w /M _n		1.5
M _z		1500
Melt Viscosity		
@ 140°C		3750 cP
@ 160°C		590 cP
@ 180°C		170 cP
Glass Transition Temperature (T _g) ^g		50 °C

^aUnless noted otherwise, all tests are run at 23°C (73°F) and 50% relative humidity.

^bUnless noted otherwise, the test method is ASTM.

^cUnits are in SI or US customary units.

^d50% in toluene.

^eCloud point temperature from 2:1 Vol:Vol aniline-methylcyclohexane, Eastman method.

^fMolecular weight, z-average from gel permeation chromatography, elution with THF.

^gGlass transition temperature by differential scanning calorimetry.

Compatibility and Solubility

Regalite™ S5100 Hydrocarbon Resin is a partially hydrogenated, light colored resin which has been formulated to give a novel balance of hot melt viscosity and cohesion. The specific balance of molecular weight and polarity of Regalite™ S5100 Hydrocarbon Resin enables the formulation of SIS and SBS based hot melt adhesives with very low viscosity and long open time, with superior room temperature cohesion compared to fully hydrogenated resins. Regalite™ S5100 Hydrocarbon Resin has a very good resistance to thermal and oxidative degradation and low odor. The high polarity of Regalite™ S5100 Hydrocarbon Resin, combined with the inherent low adhesive viscosity, result in excellent adhesion to low surface energy substrates such as polyethylene.

Soluble at all useful proportions in aliphatic, aromatic, and chlorinated hydrocarbons. Insoluble in alcohols and water.

Compatible at all ratios, or in limited but practically useful proportions, with SBS (styrene-butadiene-styrene) block copolymers, SIS (styrene-isoprene-styrene) block copolymers and EVA (ethylene-vinyl acetate) and EBA (ethylene-butyl-acrylate) copolymers.

Packaging

Regalite™ S5100 Hydrocarbon Resin is pastillated and packed in polyethylene bags of 20 kg net, and supplied on shrinkwrapped pallets of 50 bags (1000 kg) each, from Eastman facilities in The Netherlands and from warehouses located in Europe.

Regalite™ S5100 Hydrocarbon Resin is supplied in heated, insulated and inerted bulk containers, from Eastman facilities in The Netherlands.

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.

For the molten material a storage temperature of 160°C under inert conditions is recommended.

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.

Regalite™ S5100 Hydrocarbon Resin will remain within product specification limits, as mentioned under the heading "Product Specifications", for a period of at least twelve months after shipment from Eastman 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. Eastman makes no representation that the material in any particular shipment will conform exactly to the values given.

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