EASTMAN

Technical Data Sheet

Regalite™ R7100 Hydrocarbon Resin

Applications

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

Product Description

Regalite™ R7100 Hydrocarbon Resin is a partially hydrogenated water-white inert thermoplastic resin derived from petrochemical feedstocks. This resin is especially designed as a tackifier in hot melt adhesives based on SBS block copolymers, providing excellent color retention upon aging.

Typical Properties

Property[a]	Test Method[b]	Typical Value, Units[c]
General		
Ring and Ball Softening Point	ASTM E 28	102 °C
Color, Gardner[e]	ASTM D 6166	<1
Color, Hunterlab b[d]		
5 cm path length		6.6
Density		
@ 25°C		1.03 kg/dm^3
Cloud Point[h]		
MMAP		66 °C
Molecular Weight[g]		
M_n		600
M_w		900
M_w/M_n		1.5
M_z		1400
Melt Viscosity		
@ 140°C		3100 cP
@ 160°C		550 cP
@ 180°C		120 cP
Glass Transition Temperature (T_g)[f]		49 °C

[a] *Unless noted otherwise, all tests are run at 23°C (73°F) and 50% relative humidity.*
[b] *Unless noted otherwise, the test method is ASTM.*
[c] *Units are in SI or US customary units.*
[d] *50% resin solids in toluene*
[e] *50% in toluene.*

[f]*Glass transition temperature by differential scanning calorimetry.*
[g]*Molecular weight, z-average from gel permeation chromatography, elution with THF.*
[h]*Cloud point temperature from 2:1 Vol:Vol aniline-methylcyclohexane, Eastman method.*

Compatibility and Solubility

Regalite R7100 Hydrocarbon Resin is a partially hydrogenated, water-white resin with a unique balance of aliphatic-aromatic properties. This characteristic provides the resin with excellent tackification properties in SBS (styrene-butadiene-styrene) block copolymers whilst retaining high cohesive strength in the hot melt adhesive, due to the resin's low affinity for the styrene end-block in the block copolymer. Regalite R7100 Hydrocarbon Resin has an excellent resistance to thermal and oxidative degradation. The resin also provides for low melt viscosities in hot melt adhesives due to its molecular weight and structure, making it an ideal choice for sprayable adhesives. The polar characteristic of Regalite R7100 Hydrocarbon Resin, due to its unique structure, results 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) copolymers.

Packaging

Regalite® R7100 Hydrocarbon Resin is pastillated and packed in polyethylene bags of 20 kg net, and supplied on shrink-wrapped pallets of 50 bags (1000 kg) each, from Eastman’s 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) 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.

Regalite® R7100 Hydrocarbon Resin material will remain within product specification limits, as mentioned under the heading "Product Specifications" (overleaf), for a period of at least twelve months after shipment from Eastman'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.
