TECHNICAL DATA SHEET

Regalite™ S5100 Hydrocarbon Resin

REGALITE™ S5100 hydrocarbon resin is a 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.

- Good compatibility with styrene block copolymers, EVA, and many polar elastomers
- SBS tackifier
- Very good resistance to thermal and oxidative degradation
- Water-white initial color

For further information regarding this product please refer to:

Synthomer Adhesive Technologies

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Property	Typical Value	Unit	Method[1]
Ring and Ball Softening Point	100	°C	ASTM E 28
Color, Hunterlab b	4		Uncentrifuged, 5 cm path length, 50% solids in toluene
Density at 25°C	1.03	kg/dm³	
MMAP Cloud Point	59	°C	from 1:2 mixture of methylcyclohexane and aniline
Molecular Weight, Mn	610	g/mol	GPC, using polystyrene standards, elution with THF
Molecular Weight, Mw	870	g/mol	
Molecular Weight, Mz	1260	g/mol	
Polydispersity (Mw/Mn)	1.4		
Melt Viscosity at 140°C	3750	cP	Brookfield
Melt Viscosity at 160°C	590	cP	
Melt Viscosity at 180°C	170	cP	
Glass Transition Temperature (Tg)	50	°C	DSC, 20°C/minute

[1] internal method based upon the specified norm

Applications

Caulks and Sealants, Roadmarking, Carpet, Additives, Metal coatings, Graphics, Labels, Coatings, Tapes

Compatibility and Solubility

Compatible at all ratios, or in limited but practically useful proportions, with natural and synthetic rubbers, butyl rubber, SBR, SBS (styrene-butadiene-styrene) block copolymers, SEBS (styrene- ethylene/butylene- styrene) block copolymers, SIS (styrene-isoprene-styrene) block copolymers, and EVA (ethylene-vinyl acetate) and EBA (ethylene-butyl-acrylate) copolymers. Soluble at all useful proportions in aliphatic, aromatic, and chlorinated hydrocarbons. Insoluble in alcohols and water.

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 Synthomer facilities in the Netherlands and from warehouses located in Europe.
REGALITE S5100 is supplied in heated, insulated and inerted bulk containers, from Synthomer 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 sales specification limits for a period of at least twelve months after shipment from Synthomer 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, the product should be reanalyzed for critical properties at the end of its shelf life to determine if it meets specification for use.

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.