EASTMAN

Technical Data Sheet

Kristalex™ 3115LV Hydrocarbon Resin

Applications

- Adhesives/sealants-b&c
- Automotive
- Labels non food contact
- Packaging tape
- Rubber modification
- Tape non food contact

Key Attributes

- Excellent thermal stability
- High softening point
- Low organic volatile content
- Made from pure aromatic monomer
- Water-white initial color

Product Description

Kristalex™ 3115LV Hydrocarbon Resin is a water-clear, color stable, low molecular weight thermoplastic hydrocarbon polymer with low organic volatile content. Based on purified 8 - 9 carbon aromatic monomers, this resin is indicated for use in plastics modification, hot melt adhesives and coatings, sealants and caulks. Kristalex™ 3115LV is compatible with a wide variety of oils, waxes, alkyds, plastics, and elastomers, and is soluble in many common organic solvents. In EVA-based hot melt adhesives Kristalex™ 3115LV is compatible with EVA grades with up to 18% vinyl acetate and is useful in formulating low-color adhesives with improved high temperature resistance. In styrenic block copolymer based adhesives Kristalex™ 3115LV preferentially associates with the styrenic endblocks, producing higher cohesion at temperatures up to 70°C without affecting tack and adhesion properties.

Typical Properties

Property	Test Method	Typical Value, Units
General		
Ring and Ball Softening Point	ASTM E 28	120 °C
Total Organic Volatile Content[a]		<500 ppm
Color, Gardner[e]	ASTM D 6166	<1
Color YID[b]		10
Cloud Point[g]		
DACP		<-40 °C
MMAP		5 °C
OMS (full)		105 °C
Molecular Weight[f]		
M_n		900
M_w		2,100
M_w/M_n		2.4
M_z		3,700
Melt Viscosity[c]		
10 poise		256 °C
100 poise		216 °C
1000 poise		183 °C
Glass Transition Temperature (T_g)[d]		72 °C

[a] *Total volatile content measured by High Performance Liquid Chromatography (HPLC)*
[b] *50% resins solids in toluene*
[c] *Brookfield RVT viscometer with Thermosel*
[d] *Glass transition temperature by differential scanning calorimetry.*
[e] *50% in toluene.*
[f] *Molecular weight, z-average from gel permeation chromatography, elution with THF.*

[g]*Cloud point temperature from 2:1 Vol:Vol aniline-methylcyclohexane, Eastman method.*

Compatibility and Solubility

Compatible at all ratios, or in limited but practically useful proportions, with a wide variety of materials such as SIS (styreneisoprene-styrene), SBS (styrene-butadiene-styrene) and SEBS (styrene-ethylene-butadiene-styrene) block copolymers, neoprene, nitrile, polybutadiene, acrylic polymers, chlorinated rubber, EVA resins (ethylene-vinyl acetate copolymers), styrenated alkyds, vinylated alkyds, drying oil alkyds, rosin ester resins.

Soluble in aromatic and chlorinated hydrocarbons, ketones and ethers. Insoluble is aliphatic hydrocarbons, alcohols and glycols.

Packaging

Pastilles in multi-wall paper bags (50 lbs, 22. 7 kg net wt).

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.

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