KRISTALEX™ 3070 Hydrocarbon Resin

KRISTALEX™ 3070 Hydrocarbon Resin is a water-white, highly color stable, nonpolar, low molecular weight thermoplastic polymer. This resin is compatible with a wide variety of oils, waxes, alkyds, plastics, and elastomers, and is soluble in many common organic solvents. It is indicated for use in plastics modification, adhesives, coatings, sealants, and caulks. The low softening point of KRISTALEX™ 3070 Hydrocarbon Resin indicates its potential utility in systems where performance at low temperatures such as frozen food packaging and exterior-use sealants.

In EVA-based hot melt adhesives KRISTALEX™ 3070 Hydrocarbon Resin has useful compatibility with EVA grades with up to 30% vinyl acetate and is useful in formulating low-color adhesives with good low temperature properties. In adhesives based on styrenic block copolymers KRISTALEX™ 3070 is useful in reducing melt viscosity without affecting adhesion and tack properties.

- Excellent thermal stability
- Low softening point
- Made from purified aromatic monomers
- 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	70	°C	ASTM E 28
Color, Yellowness Index	7		ASTM E 313, 50% solids in toluene
MMAP cloud point	1	°C	from 1:2 mixture of methylcyclohexane and aniline
OMS (odorless mineral spirits) cloud point	11	°C	from Stoddard solvent
Molecular Weight, Mn	560	g/mol	GPC using polystyrene standards, elution with THF
Molecular Weight, Mw	880	g/mol	
Molecular Weight, Mz	1360	g/mol	
Polydispersity (Mw/Mn)	1.6		
Melt Viscosity at 85°C	1000	poise	Brookfield
Melt Viscosity at 95°C	100	poise	
Melt Viscosity at 115°C	10	poise	
Melt Viscosity at 145°C	1	poise	
Glass Transition Temperature (Tg-midpoint)	32	°C	DSC, 20°C/minute

[1] internal method based upon the specified norm

Applications

Adhesives, Assembly, Carpet, Caulks and Sealants, Film Modification, Graphic inks, Labels, Other coatings, Packaging Tapes, Plastic Modification, Roofing, Specialty Tapes, Wax Modification, Packaging

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Compatibility and Solubility

Compatible at all ratios, or in limited but practically useful proportions, with a wide variety of materials, including styrene-butadiene rubber (SBR) and SBR block copolymers; neoprene, nitrile, polybutadiene, and acrylic polymers; chlorinated rubber; EVA resins (ethylene-vinyl acetate copolymers); styrenated, vinylated, and drying oil alkyds; rosin ester resins; and EHEC (ethyl hydroxyethyl cellulose), as well as modifying the styrenic endblocks of all styrene-containing block copolymers.

Soluble in aliphatic, aromatic, and chlorinated hydrocarbons; esters; and ketones. Insoluble in alcohols and glycols. For low or zero VOC systems KRISTALEX™ 3070 Hydrocarbon Resin is soluble in the VOC exempt solvents acetone, methyl acetate, t-butyl acetate (TBA) and perchlorobenzenetetrafluoride (PCBTF) and will tolerate some acetone and/or methyl acetate as a diluent in solvent systems based on TBA and/or PCBTF. VOC exemptions and environmental regulations vary regionally and compliance with local standards should be verified before any claims about VOC content are made.

Packaging

Solid, in light-gauge metal drums (420 lbs, 190.5 kg, net.)

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.

The useful life of this product can be affected by storage and handling conditions. When stored in the original unopened container in an enclosed area and protected from moisture, extreme temperatures and contamination, the shelf life of this product is estimated to continue to meet applicable sales specifications for 3 years from the date of manufacture. Shelf life is a guide not an absolute value. The product should be reanalyzed for critical properties at the end of its shelf life to see 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.

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