

Technical Data Sheet

Kristalex™ 3070 Hydrocarbon Resin

Applications

- Adhesives/sealants-b&c
- Bookbinding
- Carpet construction
- Case & carton sealing closings
- Casting wax
- Commercial printing inks
- Concrete
- Film modification
- Labels non food contact
- Marine
- Packaging components non food contact
- Packaging tape
- Polymer modification
- Protective coatings
- Roofing
- Specialty tape
- Tape non food contact
- Tires

Key Attributes

- Excellent thermal stability
- Low softening point
- Made from purified aromatic monomers
- Water-white initial color

Product Description

Kristalex 3070 hydrocarbon resin is a water clear, 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 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 is compatible 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.

Typical Properties

Property ^a	Test Method ^b	Typical Value, Units ^c
General		
Ring and Ball Softening Point	ASTM E 28	70 °C
Color, Gardner ^e	ASTM D 6166	<1
Color ^d		
YID		7
Cloud Point ^h		
DACP		<-40 °C
MMAP		1 °C
OMS		4 °C
Molecular Weight ^g		
M _n		600
M _w		900
M _w /M _n		1.5
M _z		1330
Melt Viscosity		
1 poise		145 °C 115 °C

10 poise	
100 poise	95 °C
1000 poise	85 °C
Glass Transition Temperature (T _g) ^f	32 °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% resins solids in toluene

^e50% in toluene.

^fGlass transition temperature by differential scanning calorimetry.

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

^hCloud 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, including 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 (ethylhydroxyethylcellulose). Soluble in aliphatic, aromatic, and chlorinated hydrocarbons; esters; and ketones. Insoluble in alcohols and glycols. For low or zero VOC systems Kristalex™ 3070 is soluble in the VOC exempt solvents t-butyl acetate 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

It is recommended that strict control of inventory be observed at all times, taking care that the oldest material is used first. Hydrocarbon resins have been stored for up to two years with no observable change in properties. For storage periods exceeding two years the material should be re-tested to verify compliance with product specifications, but there is no indication that these products cannot be stored for many years without affecting performance.

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