EASTMAN

Technical Data Sheet

Endex™ 160 Hydrocarbon Resin

Applications

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

Key Attributes

- Heat stability
- Highest softening point available
- Pure aromatic monomer composition
- Water-white initial color

Product Description

A water-white thermoplastic resin made from purified aromatic hydrocarbon monomers. Used to modify the melt flow and increase the temperature resistance of styrenic plastic and rubber. Reinforces the styrene end blocks of styrenic block copolymers. In adhesives Endex™ 160 hydrocarbon resin will associate with the styrenic endblocks, producing higher cohesion at temperatures up to 70°C without affecting tack and adhesion properties. Endex™ 160 hydrocarbon resin has the highest softening point among all hydrocarbon resins available from Eastman Chemical Company.

Typical Properties

Property[a]	Test Method[b]	Typical Value, Units[c]
General		
Ring and Ball Softening Point	ASTM E 28	158 °C
Color, Gardner[e]	ASTM D 6166	<1
Cloud Point[g]		
DACP		-12 °C
MMAP		16 °C
OMS		152 °C
Molecular Weight[f]		
M_n		2900
M_w		9200
M_w/M_n		3.6
M_z		22500
Melt Viscosity		
10 poise		245 °C
100 poise		210 °C
1000 poise		180 °C
		110 °C

Glass Transition Temperature (T_g)[d]

[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]*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 with polystyrene or styrene-containing polymers. Incompatible with polyolefins, natural rubber, butyl rubber, EPDM, and EVA. Soluble in aliphatic, aromatic, and chlorinated hydrocarbons; esters; and ketones. Insoluble in alcohols and glycols; limited solubility in nitroparaffins. For low or zero VOC systems Endex™ 160 is soluble in the VOC exempt solvents 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

Pastilles, in multiwall 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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