

Hunthumber™ JMV400

Adhesive Resin

Description

Hunthumber™ JMV400 resins are acid-anhydride-modified linear low density polyethylene(LLDPE) resins. They are available in pellet form for use in conventional extrusion and coextrusion equipment designed to process polyethylene (PE) resins.

Typical Characteristics

Characteristics

Hunthumber™ JMV400 resin exhibits physical properties similar to linear low-density polyethylene with the similar density and melt index. Use of these adhesive resins in coextruded PE/barrier structures offers improved thermal resistance over that of ethylene vinyl acetate-based adhesive resins.

Applications

Hunthumber™ JMV400 resin is specifically designed to provide high adhesion to both metals and polyolefins when converted into film form and used as a thermal lamination film. It has a low coefficient of friction for easy film handling and provides strong bonds that fail cohesively.

Hunthumber™ JMV400 resin can be utilized in the following co-extrusion processes:

- Blown film

Typical Properties

Properties	Test Method(s)	Typical Value	Unit
Density	ASTM D792 ISO 1183	0.92	g / cm ³
Melt Flow Index(190°C/2.16kg)	ASTM D1238 ISO 1133	4.1	g / 10min
Melting Point	ASTM D3418 ISO 3146	128	°C
Vicat Softening Point	ASTM D1525 ISO 306	100	°C

Adhesive Evaluation

The performance of any adhesive resin should be evaluated within the context of the application. The adhesive is designed to bond materials that would not ordinarily adhere to each other. In most cases, peel strength is used as a measure of performance. Although this is a convenient test, peel strength is affected not only by adhesion, but also by peel angle, separation rate, temperature, and tensile and modulus properties of the materials, and often by the time elapsed since the formation of the bond. Post-treatment of the multi-layer structure, such as heat sealing, thermoforming or orientation can also affect peel strength.

Processing Information

Maximum Processing Temperature

260°C (500°F)

General Processing Information

Hunthumber™ JMV400 resins have high softening points. In coextrusions with thermally sensitive resins such as EVOH or EVA, we suggest that the maximum melt temperature be limited to 235°C (455°F) to guard against overheating the EVOH or EVA. If adhesion results are adequate, we suggest evaluating even lower melt temperatures such as 210 - 220°C (410 -428°F). For coextrusion with polyamides or other thermally stable resins, the melt temperature can be higher. We suggest a maximum melt temperature of 260C(500°F). This should provide acceptable bond strengths and film quality under almost all coextrusion conditions. If adhesion results are adequate, melt temperatures can be lowered. Higher extrusion temperatures, particularly when coupled with long residence times, may result in some film imperfections. In certain streamlined extrusion operations, where residence times are short, it may be possible use temperatures higher than 260°C (500°F).

Storage Condition

Storage Condition

Hunthumber™ JMV400 resins should be stored under dry and cool conditions. Improper storage conditions may cause degradation and have consequences on physical properties of the product.

Updated February 2022

Due to the product usage conditions and methods, as well as the referenced information being beyond our control, Hunthumber explicitly states that it assumes no responsibility whatsoever for any results obtained or arising from the use of the product or reliance on such information; it does not make any warranty of fitness for a particular purpose, warranty of merchantability, or any other express or implied warranty concerning the goods described or the information provided herein. The information provided here pertains only to the specific product designated and may not be applicable when the product is used in combination with other materials or in any process. The user should conduct thorough testing before commercializing any application. The content herein does not constitute a license to practice under any patent and should not be construed as an inducement to infringe any patent. The user is advised to take appropriate measures to ensure that any proposed use of the product will not result in patent infringement.

See MSDS for Health & Safety Considerations.