

ADVANCENE™ EE-4811-AAH

High Density Polyethylene Resin

Overview :

ADVANCENE™ EE-4811-AAH High Density Polyethylene Resin is a high molecular weight, high-density polyethylene copolymer that has been designed specifically for tubular film extrusion. Its broad molecular weight distribution and density successfully combine excellent performance at high extrusion rates with high film strength and rigidity. Tubular films of ADVANCENE™ EE-4811-AAH Resin are recommended for high strength grocery sacks, shopping bags and notion and millinery bags. The excellent drawdown characteristic of this product permits production of high-quality thin films for multiwall sack liners and replacements for thin paper products. The combination of strength and drawdown makes this resin ideal for downgauging in many applications. Films are readily treated and printed to give high-quality graphics.

ADVANCENE™ EE-4811-AAH Resin is compatible with color concentrates, thus permitting the production of a variety of colored films that serve as protective and attractive decorative wraps.

Main Characteristics :

- Hexene High Density Resin.
- High film strength.
- Excellent drawdown.

Physical	Nominal Value (SI)	Test Method
Density	0.948 g/cm ³	ASTM D792
Melt Index (190°C/21.6 kg)	11 g/10min	ASTM D1238, ISO 1133
Mechanical	Nominal Value (SI)	Test Method
Flexural Modulus - 1% Secant	814 MPa	ASTM D790, ISO 178
Films	Nominal Value (SI)	Test Method
Film Thickness – Tested	12.7 µm	
Film Puncture Energy	1.20 J	Univation Method
Tensile Strength		
MD: Yield 0.500 mil (12.7 µm)	27.6 MPa	ASTM D882
TD: Yield 0.500 mil (12.7 µm)	24.1 MPa	
MD: Break, 0.500 mil (12.7 µm)	55.2 MPa	
TD: Break, 0.500 mil (12.7 µm)	53.8 MPa	
Tensile Elongation		
MD: Break, 0.500 mil (12.7 µm)	270 %	ASTM D882
TD: Break, 0.500 mil (12.7 µm)	350 %	
Dart Drop Impact (0.500 mil (12.7 µm))	150 g	ASTM 1709A, ISO 7765
Elmendorf Tear Strength		
MD: 0.500 mil (12.7 µm)	70 g	ASTM 1922 ¹ , ISO 6383-2
TD: 0.500 mil (12.7 µm)	150 g	
Thermal	Nominal Value (SI)	Test Method
Vicat Softening Temperature	124 °C	ASTM D1525, ISO 306
Melting Temperature (DSC)	132 °C	ASTM D3418, ISO 3146

Extrusion	Nominal Value (SI)	Test Method
Melt Temperature	216 °C	

Extrusion Notes

Fabrication Conditions for Blown Film:

- Screw Size: 2.5 in. (63.5mm); 30:1 ratio L/D
- Crew Type: Grooved
- Die Gap: 40 mil (1 mm)
- Melt Temperature: 420°F (215°C)
- Output: 6 lb/hr/in. of die circumference
- Die Diameter: 4 in.
- Blow-Up Ratio: 4 to 1
- Screw Speed: 80 rpm
- Frost Line Height: 30 in. (760mm)

Notes :

1 Method B

AVAILABILITY :

This product is supplied in 25 kg bags in secured pallets of 60 bags (1.500 MT net). It is also supplied in jumbo bags of 1000 kg capacity.

STORAGE :

The product should be stored in dry conditions at temperatures below 50°C and protected from UV-light. Improper storage can initiate degradation, which results in odour generation and colour changes and can have negative effects on the physical properties of this product.

More information on storage can be found in Safety Information Sheet for this product.

SAFETY :

The product is not classified as a hazardous mixture.

Dust and fines from the product carry a risk of dust explosion. All equipment should be properly earthed. Inhalation of dust should be avoided as it may cause irritation of the respiratory system. Small amounts of fumes are generated during processing of the product. Proper ventilation is therefore required.

A Safety Information Sheet is available on request. Please contact your ETHYDCO representative for more details on various aspects of safety, recovery and disposal of the product.

RECYCLING :

The product is suitable for recycling using modern methods of shredding and cleaning. In-house production waste should be kept clean to facilitate direct recycling.

RELATED DOCUMENTS :

Most datasheets and statements are available on ETHYDCO website www.ethydco-eg.com. If more information is required, please contact a ETHYDCO representative for information.

DISCLAIMER :

The product(s) mentioned herein are not intended to be used for medical, pharmaceutical or healthcare applications and we do not support their use for such applications.

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication, however we do not assume any liability whatsoever for the accuracy and completeness of such information.

ETHYDCO makes no warranties which extend beyond the description contained herein. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose.

It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products.

No liability can be accepted in respect of the use of ETHYDCO products in conjunction with other materials. The information contained herein relates exclusively to our products when not used in conjunction with any third party materials.

ADVANCENE™ is a trademark of ETHYDCO

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