



ADVANCENE™ EM-4810-AAH

High Density Polyethylene Resin

Overview :

ADVANCENE™ EM-4810-AAH HDPE Resin is a polymer with broad molecular weight distribution and high molecular weight. This product provides an excellent combination of extrudability and parison stability, which contribute to uniform wall thickness in large parts.

ADVANCENE™ EM-4810-AAH HDPE Resin is ideal for blow molding containers of > 80 liters closed head shipping containers and other similar parts. The broad distribution also provides outstanding environmental stress crack resistance (ESCR) at a good rigidity. Because of these characteristics, a wide variety of products, such as industrial chemicals, latex paints, printing inks, foodstuffs, adhesives and other chemical specialties may be packaged in containers produced from this resin. The smooth surface of molded parts is readily treated and printed for high quality applications

Main Characteristics :

- Outstanding environmental stress crack resistance.
- Excellent parison melt strength / low sag.
- Good extrudability / processability.
- Good rigidity.

Physical	Nominal Value (SI)	Test Method
Density	0.948 g/cm ³	ASTM D792
Melt Index		
Melt Index (190°C/21.6 kg)	10 g/10min	ASTM D1238, ISO 1133
Environmental Stress-Cracking Resistance		ASTM D1693 ¹
50°C, 100% Igepal, F50	> 1500 hr	
Mechanical	Nominal Value (SI)	Test Method
Tensile Strength		
Yield	22.8 MPa	ASTM D638 ¹ , ISO 527
Break	36.5 MPa	
Tensile Elongation		
Yield	6.0 %	ASTM D638 ¹ , ISO 527
Break	900 %	
Flexural Modulus – 2% Secant	855 MPa	ASTM D790B ¹ , ISO 178
Impact	Nominal Value (SI)	Test Method
Tensile Impact Strength	462 KJ/m ²	ASTM D1822 ^{1,2} , ISO 8256
Hardness	Nominal Value (SI)	Test Method
Durometer Hardness (Shore D)	57	ASTM D2240 ¹ , ISO/IEC 17025:1999
Thermal	Nominal Value (SI)	Test Method
Deflection Temperature under load		ASTM D648 ¹ , ISO 75
66 psi (0.45 MPa), Unannealed	66°C	
Brittleness Temperature	<-76°C	ASTM D746 ¹ , ISO-974 (E)
Vicat Softening Temperature	127°C	ASTM D1525, ISO 306

Melting Temperature (DSC)	130°C	ASTM D3418, ISO 3146
Peak Crystallization Temperature (DSC)	114°C	ASTM D3418, ISO 3146

Notes :

1 Molded and tested in accordance with ASTM D4976

2 Type S

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.ethydcog.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