

# 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 from **20 – 212 L** in size 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 are produced from this resin. The smooth surface of molded parts is readily treated and printed for high quality applications

### Applications:

- Latex containers
- Food products package
- Industrial chemicals containers
- Detergents and bleach containers
- Food products package
- Adhesives, paints and printing inks containers

### Additives:

- Thermal Stabilizer

### Complies with:

- Europe EU 10/2011 followed by its amended.
- U.S. FDA 21 CFR 177.1520(c)3.1a

Physical Properties	Nominal Value (SI)	Test Method
Density	0.948 g/cm <sup>3</sup>	ASTM D792
Melt Index (190°C/21.6 kg)	10.0 g/10min	ASTM D1238, ISO 1133
Environmental Stress-Cracking Resistance (50°C, 100% Igepal, F50)	> 1500 hours	ASTM D1693 <sup>1</sup>
Mechanical Properties	Nominal Value (SI)	Test Method
Tensile Strength at Yield	22.8 MPa	ASTM D638 <sup>1</sup> , ISO 527
Tensile Strength at Break	36.5 MPa	
Tensile Elongation at Yield	6.0 %	
Tensile Elongation at Break	900 %	
Flexural Modulus – 2% Secant	855 MPa	ASTM D790B <sup>1</sup> , ISO 178
Tensile Impact Strength	462 KJ/m <sup>2</sup>	ASTM D1822 <sup>1,2</sup> , ISO 8256
Durometer Hardness (Shore D)	57	ASTM D2240 <sup>1</sup> , ISO/IEC 17025:1999
Thermal Properties	Nominal Value (SI)	Test Method
Deflection Temperature under load 66 psi (0.45 MPa), Unannealed	66°C	ASTM D648 <sup>1</sup> , ISO 75
Brittleness Temperature	<-76°C	ASTM D746 <sup>1</sup> , 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	

### Processing conditions

- Screw speed = 15–60 RPM.
- Temperature setting from 200 °C – 230 °C.

**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 on the 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.ethydc0-eg.com](http://www.ethydc0-eg.com). If more information is required, please contact an 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**

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