



## ADVANCENE™ EM-5333-AAH

*High Density Polyethylene Resin*

### Overview :

ADVANCENE™ EM-5333-AAH HDPE Resin is a multipurpose polymer designed for high speed production of blow molded containers used to package household industrial chemicals (e.g detergents, bleach, fabric softeners), toiletries and cosmetics (e.g shampoos, creams, lotions, etc.), health and medical aids, and food products. In addition, it can be blow molded into other thin-walled parts and houseware items, and can be extruded into profiles.

### Main Characteristics :

- Excellent environmental stress crack resistance and rigidity.
- High impact strength.
- Moderate swell.
- High melt strength.

| Physical                                      | Nominal Value (SI)      | Test Method                                  |
|-----------------------------------------------|-------------------------|----------------------------------------------|
| Density                                       | 0.953 g/cm <sup>3</sup> | ASTM D792                                    |
| <b>Melt Index</b>                             |                         |                                              |
| (190°C/2.16 kg)                               | 0.38 g/10min            | ASTM D1238, ISO 1133                         |
| (190°C/21.6 kg)                               | 33 g/10min              |                                              |
| <b>Enviromental Stress-Craking Resistance</b> |                         |                                              |
| 50°C, 100% Igepal, F50                        | 80 hr                   | ASTM D1693 <sup>1</sup>                      |
| Mechanical                                    | Nominal Value (SI)      | Test Method                                  |
| <b>Tensile Strength</b>                       |                         |                                              |
| Yield                                         | 26.9 MPa                | ASTM D638 <sup>1</sup> , ISO 527             |
| Break                                         | 31.0 MPa                |                                              |
| <b>Tensile Elongation</b>                     |                         |                                              |
| Yield                                         | 7.0 %                   | ASTM D638 <sup>1</sup> , ISO 527             |
| Break                                         | 1000 %                  |                                              |
| Flexural Modulus – 2% Secant                  | 1000 MPa                | ASTM D790B <sup>1</sup> , ISO 178            |
| Impact                                        | Nominal Value (SI)      | Test Method                                  |
| Tensile Impact Strength                       | 168 KJ//m <sup>2</sup>  | ASTM D1822 <sup>1,2</sup> , ISO 8256         |
| Hardness                                      | Nominal Value (SI)      | Test Method                                  |
| Durometer Hardness (Shore D)                  | 61                      | ASTM D2240 <sup>1</sup> , ISO/IEC 17025:1999 |
| Themral                                       | Nominal Value (SI)      | Test Method                                  |
| Deflection Temperature under load             |                         | ASTM D648 <sup>1</sup> , ISO 75              |
| 66 psi (0.45 MPa), Unannealed                 | 73°C                    |                                              |
| Brittleness Temperature                       | <-76°C                  | ASTM D746 <sup>1</sup> , ISO-974 (E)         |
| Vicat Softening Temperature                   | 129°C                   | ASTM D1525, ISO 306                          |
| Melting Temperature (DSC)                     | 131°C                   | ASTM D3418, ISO 3146                         |
| Peak Crystallization Temperature (DSC)        | 118°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](http://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