# ADVANCENE™ EM-4810-AAH

High Density (HMW) Polyethylene

ETHYDCO

## Message:

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 pans. 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 rigidty.

| General Information | |
|---|---|
| Features | Good Printability |
| | Good Rigidity |
| | High ESCR (Stress Cracking Resistance) |
| | High molecular weight |
| | High density |
| | Workability, good |
| | Wide molecular weight distribution |
| Uses | Packaging |
| | Container |
| Processing Method | Blow molding |
| | Extrusion |

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Specific Gravity | 0.948 | g/cm³ | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (190°C/21.6 kg) | 10 | g/10 min | ASTM D1238, ISO 1133 |
| Environmental Stress-Cracking Resistance (50°C, 100% Igepal, F50) | > 1500 | hr | ASTM D1693 |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Durometer Hardness (Shore D) | 57 | | ASTM D2240 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Strength | | | ASTM D638, ISO 527-2 |
| Yield | 22.8 | MPa | ASTM D638, ISO 527-2 |
| Fracture | 36.5 | MPa | ASTM D638, ISO 527-2 |
| Tensile Elongation | | | ASTM D638, ISO 527-2 |

| | | | |
|---|---|---|---|
| Yield | 6.0 | % | ASTM D638, ISO 527-2 |
| Fracture | 900 | % | ASTM D638, ISO 527-2 |
| Flexural Modulus - 2% Secant | 855 | MPa | ASTM D790B, ISO 178 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Impact Strength | | | |
| -- [1] | 462 | $kJ/m^2$ | ASTM D1822 |
| -- | 462 | $kJ/m^2$ | ISO 8256 |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Deflection Temperature Under Load (0.45 MPa, Unannealed) | 66.0 | °C | ASTM D648, ISO 75-2/B |
| Brittleness Temperature | < -76.0 | °C | ASTM D746, ISO 974 |
| Vicat Softening Temperature | 127 | °C | ASTM D1525, ISO 306 |
| Peak Melting Temperature | 130 | °C | ASTM D3418, ISO 3146 |
| Peak Crystallization Temperature (DSC) | 114 | °C | ASTM D3418, ISO 3146 |
| **NOTE** | | | |
| 1. | Type S | | |



## Recommended distributors for this material

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