ADVANCENE™ EM-4810-AAH

ETHYDCO - High Density (HMW) Polyethylene

General Information

Product Description

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

Features	• Good Printability • Good Processability • Good Rigidity	• High Density • High ESCR (Stress Crack Resist.) • High Molecular Weight	• Wide Molecular Weight Distribution
Uses	• Containers	• Packaging	
Processing Method	• Blow Molding	• Extrusion	

Properties [1]

Physical	Typical Value (English)		Typical Value (SI)		Test Method
Density / Specific Gravity	0.950		0.948	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/21.6 kg)	10	g/10 min	10	g/10 min	ASTM D1238 ISO 1133
Environmental Stress-Cracking Resistance (ESCR)					ASTM D1693
122°F (50°C), 100% Igepal, F50	> 1500	hr	> 1500	hr	
Mechanical	**Typical Value (English)**		**Typical Value (SI)**		**Test Method**
Tensile Strength					ASTM D638 ISO 527-2
Yield	3310	psi	22.8	MPa	
Break	5290	psi	36.5	MPa	
Tensile Elongation					ASTM D638 ISO 527-2
Yield	6.0	%	6.0	%	
Break	900	%	900	%	
Flexural Modulus - 2% Secant	124000	psi	855	MPa	ASTM D790B ISO 178

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Impact	Typical Value (English)		Typical Value (SI)		Test Method
Tensile Impact Strength					
-- [2]	220	ft·lb/in²	462	kJ/m²	ASTM D1822
--	220	ft·lb/in²	462	kJ/m²	ISO 8256
Hardness	**Typical Value (English)**		**Typical Value (SI)**		**Test Method**
Durometer Hardness (Shore D)	57		57		ASTM D2240
Thermal	**Typical Value (English)**		**Typical Value (SI)**		**Test Method**
Deflection Temperature Under Load					ASTM D648 ISO 75-2/B
66 psi (0.45 MPa), Unannealed	151	°F	66.0	°C	
Brittleness Temperature	< -105	°F	< -76.0	°C	ASTM D746 ISO 974
Vicat Softening Temperature	261	°F	127	°C	ASTM D1525 ISO 306
Peak Melting Temperature	266	°F	130	°C	ASTM D3418 ISO 3146
Peak Crystallization Temperature (DSC)	237	°F	114	°C	ASTM D3418 ISO 3146