ADVANCENE™ EM-5333-AAH

ETHYDCO - High Density Polyethylene

General Information

Product Description

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.

General

Features	• High Density • High ESCR (Stress Crack Resist.)	• High Impact Resistance • High Melt Strength	
Uses	• Containers • Cosmetic Packaging • Food Packaging	• Household Goods • Medical Packaging • Packaging	• Profiles • Thin-walled Parts
Processing Method	• Blow Molding	• Profile Extrusion	

Properties [1]

Physical	Typical Value (English)		Typical Value (SI)		Test Method
Density / Specific Gravity	0.955		0.953	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR)					ASTM D1238 ISO 1133
190°C/2.16 kg	0.38	g/10 min	0.38	g/10 min	
190°C/21.6 kg	33	g/10 min	33	g/10 min	
Environmental Stress-Cracking Resistance (ESCR)					ASTM D1693
122°F (50°C), 100% Igepal, F50	80.0	hr	80.0	hr	

Mechanical	Typical Value (English)		Typical Value (SI)		Test Method
Tensile Strength					ASTM D638 ISO 527-2
Yield	3900	psi	26.9	MPa	
Break	4500	psi	31.0	MPa	
Tensile Elongation					ASTM D638 ISO 527-2
Yield	7.0	%	7.0	%	
Break	1000	%	1000	%	
Flexural Modulus - 2% Secant	145000	psi	1000	MPa	ASTM D790B ISO 178

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Impact	Typical Value	(English)	Typical Value	(SI)	Test Method
Tensile Impact Strength					
-- [2]	79.9	ft·lb/in²	168	kJ/m²	ASTM D1822
--	79.9	ft·lb/in²	168	kJ/m²	ISO 8256
Hardness	**Typical Value**	**(English)**	**Typical Value**	**(SI)**	**Test Method**
Durometer Hardness (Shore D)	61		61		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	163	°F	73.0	°C	
Brittleness Temperature	< -105	°F	< -76.0	°C	ASTM D746 ISO 974
Vicat Softening Temperature	264	°F	129	°C	ASTM D1525 ISO 306
Peak Melting Temperature	268	°F	131	°C	ASTM D3418 ISO 3146
Peak Crystallization Temperature (DSC)	244	°F	118	°C	ASTM D3418 ISO 3146