



ADVANCENE™ EM-5204-UVH

ETHYDCO - High Density Polyethylene

General Information

Product Description

ADVANCENE™ EM-5204-UVH High Density Polyethylene (HDPE) Resin is produced via advanced gas phase PE process and is intended for use in injection molding applications such as caps & closures, pails, industrial parts and other shipping containers. This resin has been designed to provide excellent processability for molders and to meet the rigorous performance characteristics of applications requiring stackability, environmental stress crack resistance and impact strength. This resin is also suitable for cast film extrusion processing.

Main Characteristics:

- For injection molded pails, industrial parts and other shipping containers.
- For cast film extrusion.
- Hexene High Density Resin.
- Excellent impact strength, stress crack resistance and processability.
- Very narrow molecular weight distribution.

General

Features	<ul style="list-style-type: none"> • Excellent Processability • Hexene Copolymer 	<ul style="list-style-type: none"> • High Density • High ESCR (Stress Crack Resist.) 	<ul style="list-style-type: none"> • High Impact Resistance • Narrow Molecular Weight Distribution
Uses	<ul style="list-style-type: none"> • Caps • Cast Film 	<ul style="list-style-type: none"> • Closures • Industrial Parts 	<ul style="list-style-type: none"> • Pails • Shipping Containers
Agency Ratings	<ul style="list-style-type: none"> • EU 2002/72/EC 	<ul style="list-style-type: none"> • FDA 21 CFR 177.1520(c) 3.1a 	
Processing Method	<ul style="list-style-type: none"> • Cast Film 	<ul style="list-style-type: none"> • Injection Molding 	

Properties ¹

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	0.954	0.952 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	4.7 g/10 min	4.7 g/10 min	ASTM D1238 ISO 1133
Environmental Stress-Cracking Resistance (ESCR)			ASTM D1693
122°F (50°C), 100% Igepal, F50	24.0 hr	24.0 hr	
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Strength			ASTM D638 ISO 527-2
Yield	3610 psi	24.9 MPa	
Break	3630 psi	25.0 MPa	
Tensile Elongation			ASTM D638 ISO 527-2
Yield	9.5 %	9.5 %	
Break	1100 %	1100 %	
Flexural Modulus - 2% Secant	138000 psi	950 MPa	ASTM D790B ISO 178

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Impact	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Impact Strength			
-- ²	40.0 ft·lb/in ²	84.1 kJ/m ²	ASTM D1822
--	40.0 ft·lb/in ²	84.1 kJ/m ²	ISO 8256
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Durometer Hardness (Shore D)	59	59	ASTM D2240
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	162 °F	72.0 °C	ISO 75-2/B
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)	246 °F	119 °C	ASTM D3418 ISO 3146