



Formolene® HL3721

Formosa Plastics Corporation, U.S.A. - Medium Density Polyethylene

Tuesday, November 5, 2019

General Information

Product Description

Formolene® HL3721 is a high molecular weight hexene copolymer resin tailored specifically for cast extrusion production of geomembrane films. The resin provides an excellent balance of ESCR properties, broad fusion range, excellent melt strength and good overall processability.

Suggested Applications:

- Landfill Liners
- Gasoline and Chemical Tank Containment Liners
- Tunnel Moisture Barriers
- Mine Tailing Collection Projects

General

Material Status	• Commercial: Active
Availability	• North America
Features	• Fast Fusion • Good ESCR (Stress Crack Resist.) • Good Processability • Hexene Comonomer • High Melt Strength • High Molecular Weight • Medium Density
Uses	• Geo Membranes • Liners
Agency Ratings	• EC 1907/2006 (REACH)
Forms	• Pellets
Processing Method	• Cast Film

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	0.937	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (190°C/21.6 kg)	21	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR)			
10% Igepal, F50	> 1500	hr	ASTM D1693B
100% Igepal, F50	> 1500	hr	ASTM D1693C
SP-NCTL	> 1.2	month	ASTM D5397
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ² (Yield)	2900	psi	ASTM D638
Tensile Elongation ² (Break)	800	%	ASTM D638
Flexural Modulus - Tangent ³ (0.0394 in, 0.630 in Span)	120000	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Tensile Impact Strength ⁴	190	ft-lb/in ²	ASTM D1822
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	57		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	136	°F	ASTM D648A
Brittleness Temperature ⁵	< -103	°F	ASTM D746A
Vicat Softening Temperature	221	°F	ASTM D648 ⁶

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Notes

¹ Typical properties: these are not to be construed as specifications.

² Type IV, 2.0 in/min

³ 0.50 in/min

⁴ Type S Bar

⁵ Type I

⁶ Rate A (50°C/h), Loading 1 (10 N)
