

Total HL 428 HDPE Film Grade

Category : Polymer , Film , Thermoplastic , Polyethylene (PE) , HDPE , MDPE , Medium Density Polyethylene (MDPE), Film Grade

Material Notes:

Medium molecular weight grade. Excellent processability, excellent compatibility with LDPE and LLDPE, good tear and impact strength, good stiffness, excellent drawdown, and good moisture barrier properties. Applications: Multi-wall liners, gas flush poultry bags, mailing envelopes, heavy duty shipping sacks, fresh cut produce packaging, and coextrusions. Information provided provided by Total Petrochemicals.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Total-HL-428-HDPE-Film-Grade.php

Physical Properties	Metric	English	Comments
Density	0.947 g/cc	0.0342 lb/in ³	ASTM D792
Water Vapor Transmission	7.76 g/m ² /day	0.500 g/100 in ² /day	High Stalk Extrusion - 6:1 FLH/D ratio and 4:1 BUR; ASTM F1249
	@Thickness 0.0254 mm	@Thickness 0.00100 in	
	10.9 g/m ² /day	0.702 g/100 in ² /day	2.5 BUR; ASTM F1249
	@Thickness 0.0254 mm	@Thickness 0.00100 in	
Thickness	25.4 microns	1.00 mil	as tested
Melt Flow	0.28 g/10 min	0.28 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	
High Load Melt Index	20 g/10 min	20 g/10 min	ASTM D1238
	@Load 21.6 kg, Temperature 190 °C	@Load 47.6 lb, Temperature 374 °F	

Mechanical Properties	Metric	English	Comments
Film Tensile Strength at Yield, MD	23.4 MPa	3400 psi	2.5 BUR; ASTM D882A
	@Thickness 0.0254 mm	@Thickness 0.00100 in	
	25.5 MPa	3700 psi	High Stalk Extrusion - 6:1 FLH/D ratio and 4:1 BUR; ASTM D882A
	@Thickness 0.0254 mm	@Thickness 0.00100 in	
Film Tensile Strength at Yield, TD	24.1 MPa	3500 psi	High Stalk Extrusion - 6:1 FLH/D ratio and 4:1 BUR; ASTM D882A
	@Thickness 0.0254 mm	@Thickness 0.00100 in	
	26.2 MPa	3800 psi	

Mechanical Properties	Metric @Thickness 0.0254 mm	English @Thickness 0.00100 in	2.5 BUR; ASTM D882A Comments
Film Elongation at Break, MD	450 % @Thickness 0.0254 mm	450 % @Thickness 0.00100 in	2.5 BUR; ASTM D882A
Film Elongation at Break, TD	600 % @Thickness 0.0254 mm	600 % @Thickness 0.00100 in	High Stalk Extrusion - 6:1 FLH/D ratio and 4:1 BUR; ASTM D882A
Film Elongation at Break, MD	600 % @Thickness 0.0254 mm	600 % @Thickness 0.00100 in	2.5 BUR; ASTM D882A
Film Elongation at Break, TD	700 % @Thickness 0.0254 mm	700 % @Thickness 0.00100 in	High Stalk Extrusion - 6:1 FLH/D ratio and 4:1 BUR; ASTM D882A
Elmendorf Tear Strength MD	10 g @Thickness 0.0254 mm	10 g @Thickness 0.00100 in	2.5 BUR; ASTM D1922
Elmendorf Tear Strength MD	28 g @Thickness 0.0254 mm	28 g @Thickness 0.00100 in	High Stalk Extrusion - 6:1 FLH/D ratio and 4:1 BUR; ASTM D1922
Elmendorf Tear Strength TD	530 g @Thickness 0.0254 mm	530 g @Thickness 0.00100 in	High Stalk Extrusion - 6:1 FLH/D ratio and 4:1 BUR; ASTM D1922
Elmendorf Tear Strength TD	1450 g @Thickness 0.0254 mm	1450 g @Thickness 0.00100 in	2.5 BUR; ASTM D1922
Dart Drop	<= 1.97 g/micron @Thickness 0.0254 mm	<= 50.0 g/mil @Thickness 0.00100 in	2.5 BUR; ASTM D1709A
Dart Drop	3.94 g/micron @Thickness 0.0254 mm	100 g/mil @Thickness 0.00100 in	High Stalk Extrusion - 6:1 FLH/D ratio and 4:1 BUR; ASTM D1709A
Dart Drop Test	<= 50.0 g	<= 0.110 lb	1.0 mil; 2.5 BUR; ASTM D1709A
Dart Drop Test	100 g @Thickness 0.0254 mm	0.221 lb @Thickness 0.00100 in	High Stalk Extrusion - 6:1 FLH/D ratio and 4:1 BUR; ASTM D1709A
Dart Drop Test	54.5 MPa	7900 psi	High Stalk Extrusion - 6:1 FLH/D ratio

Film Tensile Strength at Break, MD Mechanical Properties	Metric @Thickness 0.0254 mm	English @Thickness 0.00100 in	Comments and 4:1 BUR; ASTM D882A
	62.1 MPa @Thickness 0.0254 mm	9000 psi @Thickness 0.00100 in	2.5 BUR; ASTM D882A
Film Tensile Strength at Break, TD	18.6 MPa @Thickness 0.0254 mm	2700 psi @Thickness 0.00100 in	2.5 BUR; ASTM D882A
	39.3 MPa @Thickness 0.0254 mm	5700 psi @Thickness 0.00100 in	High Stalk Extrusion - 6:1 FLH/D ratio and 4:1 BUR; ASTM D882A
1% Secant Modulus, MD	710 MPa @Thickness 0.0254 mm	103000 psi @Thickness 0.00100 in	2.5 BUR; ASTM D882A
1% Secant Modulus, TD	1000 MPa @Thickness 0.0254 mm	145000 psi @Thickness 0.00100 in	2.5 BUR; ASTM D882A

Thermal Properties	Metric	English	Comments
Melting Point	131 °C	268 °F	ASTM D3417

Processing Properties	Metric	English	Comments
Melt Temperature	193 - 216 °C	380 - 420 °F	Extrusion

Descriptive Properties	Value	Comments
Process	Film	
Region	US & Canada	Bamberger Polymers Distribution

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