

TOTAL Polyethylene HDPE D4720

High Density (MMW) Polyethylene

TOTAL Refining & Chemicals

Message:

HDPE 4720 Polyethylene:
Medium Molecular Weight High Density Film Resin
Characteristics
Excellent processability
Good tear and impact strength
Good stiffness
Excellent compatibility with LDPE and LLDPE
Excellent drawdown
Good moisture barrier properties
Applications
Multi-wall liner
Gas flush poultry bags
Mailing envelopes
Heavy-duty shipping sacks
Fresh cut produce packaging
Coextrusions

General Information			
Features	Good Drawdown		
	Good Impact Resistance		
	Good Processability		
	Good Tear Strength		
	High Density		
	High Stiffness		
	Medium Molecular Weight		
	Moisture Resistant		
Uses	Bags		
	Food Packaging		
	Heavy-duty Bags		
	Liners		
	Packaging		
Processing Method	Blown Film		
	Coextrusion		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.947	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/2.16 kg	0.28	g/10 min	
190°C/21.6 kg	20	g/10 min	

Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	25	µm	
Secant Modulus ¹			ASTM D882A
1% Secant, MD : 25 µm	710	MPa	
1% Secant, TD : 25 µm	1000	MPa	
Tensile Strength			ASTM D882A
MD : Yield, 25 µm ²	24.1	MPa	
MD : Yield, 25 µm ³	23.4	MPa	
TD : Yield, 25 µm ⁴	25.5	MPa	
TD : Yield, 25 µm ⁵	26.2	MPa	
MD : Break, 25 µm ⁶	4.83	MPa	
MD : Break, 25 µm ⁷	62.1	MPa	
TD : Break, 25 µm ⁸	39.3	MPa	
TD : Break, 25 µm ⁹	18.6	MPa	
Tensile Elongation			ASTM D882A
MD : Break, 25 µm ¹⁰	600	%	
MD : Break, 25 µm ¹¹	450	%	
TD : Break, 25 µm ¹²	700	%	
TD : Break, 25 µm ¹³	600	%	
Elmendorf Tear Strength			ASTM D1922
MD : 25 µm ¹⁴	28	g	
MD : 25 µm ¹⁵	10	g	
TD : 25 µm ¹⁶	530	g	
TD : 25 µm ¹⁷	1500	g	
Water Vapor Transmission Rate ¹⁸ (38°C, 25 µm)	7.8	g/m ² /24 hr	ASTM E96
Thermal	Nominal Value	Unit	Test Method
Melting Temperature	131	°C	ASTM D3417
Additional Information	Nominal Value	Unit	Test Method
Dart Impact			ASTM D1709
25.4 µm ¹⁹	100	g	
25.4 µm ²⁰	< 50	g	
Extrusion	Nominal Value	Unit	
Melt Temperature	193 to 216	°C	
NOTE			
1.	Film was produced at 1.0 mil with a 2.5 BUR		
2.	High Stalk Extrusion - Film was produced at 1.0 mil with a 6:1 FLH/D ratio and a 4:1 BUR		
3.	Film was produced at 1.0 mil with a 2.5 BUR		

4.	High Stalk Extrusion - Film was produced at 1.0 mil with a 6:1 FLH/D ratio and a 4:1 BUR
5.	Film was produced at 1.0 mil with a 2.5 BUR
6.	High Stalk Extrusion - Film was produced at 1.0 mil with a 6:1 FLH/D ratio and a 4:1 BUR
7.	Film was produced at 1.0 mil with a 2.5 BUR
8.	High Stalk Extrusion - Film was produced at 1.0 mil with a 6:1 FLH/D ratio and a 4:1 BUR
9.	Film was produced at 1.0 mil with a 2.5 BUR
10.	High Stalk Extrusion - Film was produced at 1.0 mil with a 6:1 FLH/D ratio and a 4:1 BUR
11.	Film was produced at 1.0 mil with a 2.5 BUR
12.	High Stalk Extrusion - Film was produced at 1.0 mil with a 6:1 FLH/D ratio and a 4:1 BUR
13.	Film was produced at 1.0 mil with a 2.5 BUR
14.	High Stalk Extrusion - Film was produced at 1.0 mil with a 6:1 FLH/D ratio and a 4:1 BUR
15.	Film was produced at 1.0 mil with a 2.5 BUR
16.	High Stalk Extrusion - Film was produced at 1.0 mil with a 6:1 FLH/D ratio and a 4:1 BUR
17.	Film was produced at 1.0 mil with a 2.5 BUR
18.	High Stalk Extrusion - Film was produced at 1.0 mil with a 6:1 FLH/D ratio and a 4:1 BUR
19.	High Stalk Extrusion - Film was produced at 1.0 mil with a 6:1 FLH/D ratio and a 4:1 BUR
20.	Film was produced at 1.0 mil with a 2.5 BUR

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