

DOWLEX™ 2045

Polyethylene Resin

The Dow Chemical Company

Message:

Linear Low Density Polyethylene

For heavy duty film applications

Complies with U.S. FDA 21 CFR 177.1520 (c) 3.2a.

Canadian HPFB No Objection (With Limitations)

EU, No 10/2011

Consult the regulations for complete details.

General Information			
Agency Ratings	FDA 21 CFR 177.1520(c) 3.2a		
	HPFB (Canada) No Objection 2		
	Europe No 10/2011		
Forms	Particle		
Processing Method	Blow film		
	cast film		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.920	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.0	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Film Puncture Resistance			Internal method
20 µm	22.2	J/cm ³	Internal method
51 µm	19.4	J/cm ³	Internal method
Film strength			ASTM D882
MD : 20 µm	319	J/cm ³	ASTM D882
MD : 51 µm	346	J/cm ³	ASTM D882
TD : 20 µm	356	J/cm ³	ASTM D882
TD : 51 µm	351	J/cm ³	ASTM D882
secant modulus			ASTM D882
2% secant, MD: 20 µm	210	MPa	ASTM D882
2% secant, MD: 51 µm	194	MPa	ASTM D882
2% secant, TD: 20 µm	232	MPa	ASTM D882
2% secant, TD: 51 µm	233	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Yield, 20 µm	11.8	MPa	ASTM D882
MD: Yield, 51 µm	10.9	MPa	ASTM D882

TD: Yield, 20 μm	12.1	MPa	ASTM D882
TD: Yield, 51 μm	12.3	MPa	ASTM D882
MD: Break, 20 μm	64.2	MPa	ASTM D882
MD: Fracture, 51 μm	55.1	MPa	ASTM D882
TD: Break, 20 μm	52.7	MPa	ASTM D882
TD: Fracture, 51 μm	49.8	MPa	ASTM D882
Tensile Elongation			ASTM D882
MD: Break, 20 μm	640	%	ASTM D882
MD: Fracture, 51 μm	830	%	ASTM D882
TD: Break, 20 μm	880	%	ASTM D882
TD: Fracture, 51 μm	890	%	ASTM D882
Dart Drop Impact			ASTM D1709A
20 μm	150	g	ASTM D1709A
51 μm	290	g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD : 20 μm	230	g	ASTM D1922
MD : 51 μm	900	g	ASTM D1922
TD : 20 μm	520	g	ASTM D1922
TD : 51 μm	1200	g	ASTM D1922
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	108	°C	ASTM D1525
Melting Temperature (DSC)	122	°C	Internal method
Optical	Nominal Value	Unit	Test Method
Gloss			ASTM D2457
45°, 20.3 μm	63		ASTM D2457
45°, 50.8 μm	60		ASTM D2457
Haze			ASTM D1003
20.3 μm	9.0	%	ASTM D1003
50.8 μm	10	%	ASTM D1003
Extrusion instructions			

吹塑薄膜的制造条件:
 螺杆尺寸:2.5 英寸 (63.5 mm);30:1 L/D
 螺杆类型:DSBII
 模具间隙:70 密尔 (1.8 mm)
 熔体温度: 450°F (232°C)
 输出:模具周长的 10 磅/小时/英寸
 模具直径:6 英寸
 放大比:2.5:1
 螺杆速度:83 rpm

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