

ELITE™ 5110G

Enhanced Polyethylene Resin

The Dow Chemical Company

Message:

For industrial and consumer film applications

Excellent impact resistance

High modulus and low blocking tendencies for handling and convertibility

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

Consult the regulations for complete details.

ELITE™ 5110G Enhanced Polyethylene Resin is a copolymer produced via INSITE™ Technology from Dow Plastics. It offers a unique combination of high modulus and excellent impact strength, allowing for downgauging in bag applications. ELITE 5110 resin has excellent tensile strength and good tear properties. It complies U.S. FDA regulation 21 CFR 177.1520 (c) 3.2a when used unmodified and processed according to good manufacturing practices. Please contact your nearest Dow office regarding food contact compliance statements.

General Information			
Agency Ratings	FDA 21 CFR 177.1520(c) 3.2a		
Forms	Particle		
Processing Method	Blow film		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.926	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.85	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	51	µm	
Film Puncture Energy (51 µm)	6.91	J	Internal method
Film Puncture Force (51 µm)	97.0	N	Internal method
secant modulus			ASTM D882
2% secant, MD: 51 µm	277	MPa	ASTM D882
2% secant, TD: 51 µm	330	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Yield, 51 µm	13.9	MPa	ASTM D882
TD: Yield, 51 µm	14.6	MPa	ASTM D882
MD: Fracture, 51 µm	57.5	MPa	ASTM D882
TD: Fracture, 51 µm	51.9	MPa	ASTM D882
Tensile Elongation			ASTM D882
MD: Fracture, 51 µm	600	%	ASTM D882
TD: Fracture, 51 µm	660	%	ASTM D882
Dart Drop Impact (51 µm)	410	g	ASTM D1709B
Elmendorf Tear Strength			ASTM D1922
MD : 51 µm	560	g	ASTM D1922
TD : 51 µm	1100	g	ASTM D1922
Seal Initiation Temperature ¹ (51 µm)	120	°C	Internal method

Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	111	°C	ASTM D1525
Melting Temperature (DSC)	123	°C	Internal method
Optical	Nominal Value	Unit	Test Method
Gloss (45°, 50.8 µm)	60		ASTM D2457
Haze (50.8 µm)	13	%	ASTM D1003
Extrusion	Nominal Value	Unit	
Melt Temperature	216	°C	
Extrusion instructions			

吹塑薄膜的制造条件:
 螺杆尺寸:2.5 英寸 (63.5 mm);24:1 L/D
 螺杆类型:阻隔螺杆
 模具间隙:70 密尔 (1.8 mm)
 熔体温度:420°F (216°C)
 输出:模具周长的 6 磅/小时/英寸
 模具直径:6 英寸
 放大比:2.5:1
 螺杆速度:45 rpm
 冷冻线高度:25 英寸 (635mm)

NOTE

1. Achieve a temperature of 2 psig (8.8 N/25.4mm) heat seal strength.
J & B automatic heat sealing and thermal viscosity tester 0.5 S
holding pressure, 40 psi pressure,
Instron pulling speed 1.0 inches/min.

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