

ELITE™ 5100G

Enhanced Polyethylene Resin
The Dow Chemical Company

Message:

For industrial and consumer film applications
Extremely high impact strength
Low blocking tendencies for improved handling and convertibility
Complies with:
U.S. FDA 21 CFR 177.1520 (c) 3.2a.
Canadian HPFB No Objection
Consult the regulations for complete details.
ELITE™ 5100G Enhanced Polyethylene Resin is a copolymer produced via INSITE™ Technology from Dow Plastics. It offers excellent impact strength, good tensile and puncture properties for thick and thin gauge industrial and consumer blown film applications. This resin exhibits higher hot tack strengths than LLDPE, making it ideal for automated packaging applications.

General Information			
Agency Ratings	FDA 21 CFR 177.1520(c) 3.2a		
	HPFB (Canada) No Objection		
Forms	Particle		
Processing Method	Blow 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)	0.85	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	25	µm	
Film Puncture Energy	5.76	J	Internal method
Film Puncture Force	64.5	N	Internal method
Film Puncture Resistance	28.3	J/cm ³	Internal method
Film strength			ASTM D882
MD	98.5	J/cm ³	ASTM D882
TD	98.5	J/cm ³	ASTM D882
secant modulus			ASTM D882
1% secant, MD	272	MPa	ASTM D882
2% secant, MD	231	MPa	ASTM D882
1% secant, TD	309	MPa	ASTM D882
2% secant, TD	256	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Yield	11.9	MPa	ASTM D882
TD: Yield	12.4	MPa	ASTM D882
MD: Fracture	43.6	MPa	ASTM D882
TD: Fracture	36.0	MPa	ASTM D882

Tensile Elongation			ASTM D882
MD: Fracture	480	%	ASTM D882
TD: Fracture	620	%	ASTM D882
Dart Drop Impact	540	g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD	260	g	ASTM D1922
TD	670	g	ASTM D1922
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	106	°C	ASTM D1525
Melting Temperature (DSC)	123	°C	Internal method
Optical	Nominal Value	Unit	Test Method
Gloss (45°)	33		ASTM D2457
Haze	20	%	ASTM D1003
Extrusion instructions			

吹塑薄膜的制造条件:
 螺杆尺寸:2.5 英寸 3.5in
 螺杆类型:DSB II
 模具间隙:70 密尔 (1.8 mm)
 熔体温度:413°F
 输出:模具周长的 12 磅/小时/英寸
 模具直径:8 英寸
 放大比:2.5:1
 螺杆速度:40 rpm
 冷冻线高度:37 英寸

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

