



Linear Low Density Polyethylene (LLDPE)

Grade			Blown film					Cast film
			3210	3214	3220	3224	3224D	3225
Properties	Unit	Method						
MI _{2.16}	g/10min	ASTM D1238	1.0		2.0		2.0	
Density	g/cm ³	ASTM D1505	0.920	0.919	0.921	0.922	0.919	
Thermal Properties								
Melting point	°C	DSC	122		122		122	
Brittleness point	°C	ASTM D746	<-70		<-70		<-70	
Softening point	°C	ASTM D1525	93		93		93	
Mechanical Properties								
Tensile strength at yield	Kg/cm ²	ASTM D882B MD/TD	100/110		100/110		100/110	
Tensile strength at break	Kg/cm ²	ASTM D882B MD/TD	410/320		360/280		360/280	
Elongation at break	%	ASTM D882B MD/TD	620/840		600/800		600/800	
Secant Modulus 1%	Kg/cm ²	ASTM D882B MD/TD	1450/1600		1500/2100		1500/2100	
Elmendorf Tear Resistance	g/25 μm	ASTM D1922 MD/TD	145/370		40/430		110/300	
Dart Drop Test	g	ASTM D1709	150		120		120	
Optical Properties								
Haze	%	ASTM D1003	12	14	19	20	25	3
Gloss45°	%	ASTM D2457	53	51	57	55	51	96
Clarity	%		70	61	73	64	52	95
Additives								
Slip Agent			None	Medium	None	Medium	Medium	None
Antiblocking Agent			None	Medium	None	Medium	High	None
Characteristics			Better sealing High puncture resistance Greater drawdown High tensile strength		Better sealing Greater drawdown Good extrudability		High Puncture Resistance Greater Drawdown Greater extrudability	
Applications			Heavy duty sacks Agricultural films Liners Produce bags Stretchfilm		Light,Medium duty film Stretchfilm		Cast Stretch film Overwrap Film	
Notes	1. Blown film condition : temp.=200°C 、throughput=10kg/hr 、BUR=2.0 、 2. Cast film condition : temp.= 260°C 、 film thickness= 20 μm 3. All LLDPE products contain anti-oxidants. 4. All LLDPE products are made in gas phase process.							

Grade			Rotational molding	Injection	
			3840	3470	3490
Properties	Unit	Test Method			
Melt Index MI _{2.16}	g/10min	ASTM D1238	5.0	21	50
Density	g/cm ³	ASTM D1505	0.938	0.924	0.926
Thermal properties					
Melting point	°C	FPC Method	125	122	124
Brittleness point	°C	ASTM D746	<-70	<-70	<-70
Softening point	°C	ASTM D1525	118	93	95
Mechanical properties					
Tensile strength at yield	Kg/cm ²	ASTM D638	150	117	120
Tensile strength at break	Kg/cm ²	ASTM D638	220		
Elongation at break	%	ASTM D638	>1000	850	350
Tensile Impact Strength	kg·cm/cm ²	ASTM D1822	140		
Izod Impact Strength	Kg-cm/cm notch	ASTM D256	20		
Hardness	Shore D	ASTM D2240	60	48	50
Characteristics			Easy Processing High Strength Temperature Brittle	High Puncture Greater Drawdown Good extrudability	Better Sealing High output Rate Excellent Drawdown High Puncture
Applications			Large Crate Containers Tank Barricade	Cast Stretchfilm Overwrap Film	Cast Stretchfilm Overwrap Film
Notes			5. General injection temp.= 170 - 190°C 6. All LLDPE products meet FDA 21-177-1520. 7. Data shown are average values and should not be exa 8. All LLDPE products are ethylene-butene-1		