



## High Density Polyethylene ( HDPE ) -- Film Grade Data Sheets

Grade			Film	
			9000	9001
<b>Properties</b>	<b>Unit</b>	<b>Test Method</b>		
Melt Index MI <sub>2.16</sub>	g/10min	ASTM D1238	0.07	0.05
Melt Index MI <sub>5</sub> /MI <sub>21.6</sub>	g/10min	ASTM D1238		
Density	g/cm <sup>3</sup>	ASTM D1505	0.950	0.950
<b>Thermal properties</b>				
Melting point	°C	FPC Method	130	130
Brittleness point	°C	ASTM D746	<-70	<-70
Softening point	°C	ASTM D1525	123	123
<b>Mechanical properties</b>				
Tensile strength at yield	Kg/cm <sup>2</sup>	ASTM D638	260	260
Tensile strength at break	Kg/cm <sup>2</sup>	ASTM D638	370	380
Elongation at break	%	ASTM D638	850	800
Tensile Impact Strength	kg·cm/cm <sup>2</sup>	ASTM D1822	650	800
Izod Impact Strength	Kg-cm/cm notch	ASTM D256	22	22
Hardness	Shore D	ASTM D2240	65	65
ESCR	Hours	ASTM D1693	500	>1000
Die Swell Ratio	%	FPC Method		
Pinch-off thickness	—	FPC Method		
<b>Electrical properties</b>				
Dielectric Constant 1MHz		ASTM D1531		
Dissipation Factor 1MHz		ASTM D1531		
Volume Resistivity	Ohm-cm	ASTM D257		
<b>Characteristics</b>			High film strength and toughness High-speed processability Good film thickness distribution	High film strength and toughness Excellent processing stability Good film thickness distribution
<b>Application</b>			Small shopping bag Roll bag Super thinness bag	Shopping bag Roll bag Garbage bag Underground sewer pipe

PS.: 1. Processing condition : Processing Temperature = 180 - 220°C 、BUR = 3 - 6

2. Data shown are average values and should not be examined for specifications ◦



## High Density Polyethylene ( HDPE ) -- Drum & Blow Grade Data Sheets

Grade			Blow				
			8006	7003	8003	8003H	9003
Properties	Unit	Test Method					
Melt Index MI <sub>2.16</sub>	g/10min	ASTM D1238	0.55	0.35	0.25	0.30	0.25
Melt Index MI <sub>5</sub> /MI <sub>21.6</sub>	g/10min	ASTM D1238					
Density	g/cm <sup>3</sup>	ASTM D1505	0.960	0.955	0.958	0.958	0.952
<b>Thermal properties</b>							
Melting point	°C	FPC Method	134	132	134	134	132
Brittleness point	°C	ASTM D746	<-70	<-70	<-70	<-70	<-70
Softening point	°C	ASTM D1525	127	125	127	127	124
<b>Mechanical properties</b>							
Tensile strength at yield	Kg/cm <sup>2</sup>	ASTM D638	280	300	300	300	270
Tensile strength at break	Kg/cm <sup>2</sup>	ASTM D638	300	350	320	320	300
Elongation at break	%	ASTM D638	800	1000	1000	1000	1000
Tensile Impact Strength	kg·cm/cm <sup>2</sup>	ASTM D1822	300	400	350	350	400
Izod Impact Strength	Kg-cm/cm notch	ASTM D256	15	>40	25	>40	13
Hardness	Shore D	ASTM D2240	70	67	69	69	66
ESCR	Hours	ASTM D1693	< 30	50	30	30	200
Die Swell Ratio	%	FPC Method	1.60	1.65	1.58	1.48	1.52
Pinch-off thickness	—	FPC Method	Excellent	Good	Good	Good	Good
<b>Electrical properties</b>							
Dielectric Constant 1MHz		ASTM D1531					
Dissipation Factor 1MHz		ASTM D1531					
Volume Resistivity	Ohm-cm	ASTM D257					
<b>Characteristics</b>			Excellent stiffness Low taste high speed molding	high melt strength good balance of ESCR and stiffness	Good stiffness High rigidity Chemical resistance	Good stiffness High rigidity Good impact strength Chemical resistance	Good ESCR High toughness Chemical resistance
<b>Application</b>			Lightweight container for milk , distilled water fruit juices , soft drink	Water tank up to 25L Industrial containers	Water tank up to 25L dairy bottle Medicine cans Soy sauce tank Tool box Toys	Small bottle up to 5L dairy bottle Medicine cans Soy sauce tank Tool box Toys	Cosmetic bottle Detergent bottle Engine oil bottle Medicine cans Shoe last Tool box Toys

PS.: 1. Processing Condition : Blow Temperature = 160 - 180°C 、7001,7501,7500 for Drum processing = 190 - 230°C  
2. Data shown are average values and should not be examined for specifications .

## High Density Polyethylene ( HDPE ) -- Drum & Blow Grade Data Sheets

Grade			Drum		
			7001	7501	7500
Properties	Unit	Test Method			
Melt Index MI <sub>2.16</sub>	g/10min	ASTM D1238	0.07	0.03	0.01
Melt Index MI <sub>5</sub> /MI <sub>21.6</sub>	g/10min	ASTM D1238	0.30 / 9.0	0.10 / 4.0	< 0.10 / 2.0
Density	g/cm <sup>3</sup>	ASTM D1505	0.949	0.953	0.953
<b>Thermal properties</b>					
Melting point	°C	FPC Method	131	134	134
Brittleness point	°C	ASTM D746	<-70	<-70	<-70
Softening point	°C	ASTM D1525	126	127	127
<b>Mechanical properties</b>					
Tensile strength at yield	Kg/cm <sup>2</sup>	ASTM D638	250	270	290
Tensile strength at break	Kg/cm <sup>2</sup>	ASTM D638	350	380	380
Elongation at break	%	ASTM D638	>600	>800	>800
Tensile Impact Strength	kg·cm/cm <sup>2</sup>	ASTM D1822	400	500	600
Izod Impact Strength	Kg-cm/cm notch	ASTM D256	>40	NB	NB
Hardness	Shore D	ASTM D2240	65	67	67
ESCR	Hours	ASTM D1693	>600	>1000	>1000
Die Swell Ratio	%	FPC Method	1.70	1.75	1.75
Pinch-off thickness	—	FPC Method	Excellent	Excellent	Excellent
<b>Electrical properties</b>					
Dielectric Constant 1MHz		ASTM D1531			
Dissipation Factor 1MHz		ASTM D1531			
Volume Resistivity	Ohm-cm	ASTM D257			
<b>Characteristics</b>			Good melt strength Excellent impact Excellent ESCR Chemical resistance	High rigidity stiffness Good melt strength Excellent impact Excellent ESCR Chemical resistance	High rigidity stiffness Good melt strength Excellent impact Excellent ESCR Chemical resistance
<b>Application</b>			20-150L Drum Chemical tank Industrial containers	180-220L Drum L-ring type Drum Chemical tank Industrial containers	180-220L Drum L-ring type Drum Chemical tank

PS.: 1. Processing Condition : Blow Temperature = 160 - 180°C 、 7001,7501,7500 for Drum processing = 190 - 230°C  
2. Data shown are average values and should not be examined for specifications ◦



## High Density Polyethylene ( HDPE ) -- Extrusion Grade Data Sheets

Grade			Flat Yarn & Monofilament		Pipe	Coating	Wire & Cable
			8010	8012	*8001	9002	9007
Properties	Unit	Test Method					
Melt Index MI <sub>2.16</sub>	g/10min	ASTM D1238	1.0	1.1	0.05	0.15	0.80
Melt Index MI <sub>5</sub> /MI <sub>2.16</sub>	g/10min	ASTM D1238			0.24 / 7.0		
Density	g/cm <sup>3</sup>	ASTM D1505	0.956	0.957	0.948	0.948	0.951
<b>Thermal properties</b>							
Melting point	°C	FPC Method	134	134	129	129	130
Brittleness point	°C	ASTM D746	<-70	<-70	<-70	<-70	<-70
Softening point	°C	ASTM D1525	127	127	122	123	120
<b>Mechanical properties</b>							
Tensile strength at yield	Kg/cm <sup>2</sup>	ASTM D638	295	300	240	250	230
Tensile strength at break	Kg/cm <sup>2</sup>	ASTM D638	390	380	360	330	250
Elongation at break	%	ASTM D638	>1000	>1000	850	800	600
Tensile Impact Strength	kg·cm/cm <sup>2</sup>	ASTM D1822	350	350	750	550	260
Izod Impact Strength	Kg-cm/cm notch	ASTM D256	> 50	> 50	>30	18	6
Hardness	Shore D	ASTM D2240	69	69	64	65	65
ESCR	Hours	ASTM D1693			>1000	>1000	>48
Die Swell Ratio	%	FPC Method					
Pinch-off thickness	—	FPC Method					
<b>Electrical properties</b>							
Dielectric Constant 1MHz		ASTM D1531					2.3
Dissipation Factor 1MHz		ASTM D1531					0.00006
Volume Resistivity	Ohm-cm	ASTM D257					1×10 <sup>17</sup>
<b>Characteristics</b>			Good stretchability High tenacity Good processability High impact strength	Good stretchability High tenacity Good processability High impact strength Good glossy	Good ESCR High creep High intensity Good mechanical	Good Impact Excellent ESCR Good Strength and toughness Good chemical-resistance	High Toughness Excellent ESCR High-speed-moldability Excellent coating-appearance
<b>Application</b>			Ropes and nets Tarpaulin Woven bags Extruder sheet Foam sheet	Ropes and nets Tarpaulin Woven bags Extruder sheet Foam sheet	Gas pipe Potable water pipe Sewer & drain pipe Chemical pipe Cable conduct	Steel Pipe Coating Steel wire rope-coating	Telephone wire insulation(C C P) Outer skin in "foam-skin" (F.S)

PS.: 1. Processing Condition : Processing Temperature Yarn = 190 - 210°C 、 Monofilament = 260-280°C 、 Pipe = 180-220°C  
Steel pipe coating = 180 - 210°C 、 Wire insulation coating= 220 - 250°C

\*2. 8001 is a PE100 class material according to ISO 9080 : 2003(E)

3. Data shown are average values and should not be examined for specifications ◦



## High Density Polyethylene ( HDPE ) -- Injection Grade Data Sheets

Grade			Rotation	Injection		
			3840	8040	9040	8050
<b>Properties</b>	<b>Unit</b>	<b>Test Method</b>				
Melt Index MI <sub>2.16</sub>	g/10min	ASTM D1238	5.0	4.0	4.0	6.0
Melt Index MI <sub>5</sub> /MI <sub>2.16</sub>	g/10min	ASTM D1238				
Density	g/cm <sup>3</sup>	ASTM D1505	0.938	0.957	0.953	0.960
<b>Thermal properties</b>						
Melting point	°C	FPC Method	125	132	131	133
Brittleness point	°C	ASTM D746	<-70	<-70	<-70	<-70
Softening point	°C	ASTM D1525	118	125	122	125
<b>Mechanical properties</b>						
Tensile strength at yield	Kg/cm <sup>2</sup>	ASTM D638	150	300	230	310
Tensile strength at break	Kg/cm <sup>2</sup>	ASTM D638	220	240	260	240
Elongation at break	%	ASTM D638	>1000	900	900	900
Tensile Impact Strength	kg·cm/cm <sup>2</sup>	ASTM D1822	140	200	180	140
Izod Impact Strength	Kg-cm/cm notch	ASTM D256	20	10	12	6
Hardness	Shore D	ASTM D2240	60	69	66	70
ESCR	Hours	ASTM D1693				
Die Swell Ratio	%	FPC Method				
Pinch-off thickness	—	FPC Method				
<b>Electrical properties</b>						
Dielectric Constant 1MHz		ASTM D1531				
Dissipation Factor 1MHz		ASTM D1531				
Volume Resistivity	Ohm-cm	ASTM D257				
<b>Characteristics</b>			Easy Processing High Strength Good Low Temperature Brittle Resistance	Easy Processing High Rigidity High Warpage Resistance Very Good Impact Strength	Easy Processing High Rigidity High Strength High ESCR	Easy Processing High Rigidity Good Impact Strength
	<b>Application</b>		Large Crate Containers Tank Barricade	Pails Pallet Waste Carts Industrial containers	Bottle cap High Toughness Parts	Crates Boxes Seats Pallet

PS.: 1. Processing Condition : Injection Temperature= 170 - 190°C

2. Data shown are average values and should not be examined for specifications ◦



## High Density Polyethylene ( HDPE ) -- Injection Grade Data Sheets

Grade			Injection			
			8070	7200	8230	8300
Properties	Unit	Test Method				
Melt Index MI <sub>2.16</sub>	g/10min	ASTM D1238	6.0	22	21	30
Melt Index MI <sub>5</sub> /MI <sub>21.6</sub>	g/10min	ASTM D1238				
Density	g/cm <sup>3</sup>	ASTM D1505	0.961	0.955	0.952	0.952
<b>Thermal properties</b>						
Melting point	°C	FPC Method	135	133	131	131
Brittleness point	°C	ASTM D746	<-70	<-70	<-70	<-70
Softening point	°C	ASTM D1525	125	123	122	122
<b>Mechanical properties</b>						
Tensile strength at yield	Kg/cm <sup>2</sup>	ASTM D638	310	285	270	270
Tensile strength at break	Kg/cm <sup>2</sup>	ASTM D638	240	150	150	150
Elongation at break	%	ASTM D638	900	700	800	700
Tensile Impact Strength	kg·cm/cm <sup>2</sup>	ASTM D1822	150	95	90	80
Izod Impact Strength	Kg-cm/cm notch	ASTM D256	8	3.5	4	3
Hardness	Shore D	ASTM D2240	70	67	67	67
ESCR	Hours	ASTM D1693				
Die Swell Ratio	%	FPC Method				
Pinch-off thickness	—	FPC Method				
<b>Electrical properties</b>						
Dielectric Constant 1MHz		ASTM D1531				
Dissipation Factor 1MHz		ASTM D1531				
Volume Resistivity	Ohm-cm	ASTM D257				
<b>Characteristics</b>	Easy Processing		Good Flow	Good Flow		
	High Rigidity		Suitable for Fast Cycling-Application	Suitable for Fast Cycling-Application		
<b>Application</b>	Good Impact Strength			High Warpage Resistance		
	High Warpage Resistance					
Crates Boxes Seats Pallet			Housewares			
			Thin Walled Food Containers PET bottle base cup			

PS.: 1. Processing Condition : Injection Temperature= 170 - 190°C 、 7200F for fiber processing = 250 - 270°C  
2. Data shown are average values and should not be examined for specifications ◦