



## 7000 Series Pure Virgin Barefoot Polyethylene

This product is a strong general use clean packaging film specifically designed for use in cleanroom applications. While it has an exceptionally good cleanliness level, it can be slightly difficult to open. This is one of the more cost effective cleanroom packaging films available, while still providing a good level of cleanliness, strength and ease of sealing.

### Physical Properties

<b>Material:</b>	Virgin Barefoot Custom Polyethylene
<b>Available As:</b>	Lay-flat tubing, sheeting, bags
<b>Cleanliness Level:</b>	NASA JPG5322.1 Level 100 and IEST-STD-CC 1246 Level 100
<b>Clarity:</b>	Transparent
<b>Thickness:</b>	Various

<u>Film Properties</u>	<u>ASTM Method</u>	<u>Units</u>	<u>Typical Value</u>
Density	D1505	g/cm <sup>3</sup>	0.920
Tensile Strength ( break )	D-882	PSI	
MD			2900
TD			2300
Elongation ( break )	D-882	%	
MD			325
TD			425
Dart Drop Impact	D1709	Grams	80-100

NOTE: All values given are based on a 1.25 mil thick film



## Manufacturing Tolerances

<u>Width of Roll</u>			<u>Tolerance</u>		
2.00"	-	6.00"	+1/8"	-	-0
6.25"	-	12.00"	+3/16"	-	-1/8"
12.25"	-	24.00"	+1/4"	-	-1/8"
24.25"	-	and up	+1/2"	-	-1/4"
Includes Gussets					
Film thickness +/- 10%					
<u>Bag Length</u>			<u>Tolerance</u>		
2.00"	-	6.00"	+1/4"	-	-1/8"
6.25"	-	12.00"	+1/2"	-	-3/16"
12.25"	-	24.00"	+1/2"	-	-3/16"
24.25"	-	48.00"	+1/2"	-	-1/4"
48.25"	-	and up	+1/2"	-	-1/2"
<b><u>Black Gels/Specks</u></b> - Less than 4 Specks per 100sq inches (10"x10"area)					
Acceptable- Less than <b>or</b> equal to 1/32"					
Unacceptable- Greater than 1/16"					
<b><u>Clear Gels/Specks-</u></b> Less than 4 specks per 100sq inches (10"x10" area)					
Acceptable- Less than <b>or</b> equal to 1/8"					
Unacceptable- Greater than 1/8"					



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Note: Customer requirements may over ride all above tolerances / gel and speck requirements.

Leachable Anions and Cations by Ion Chromatology ( IC )

Concentration in 10<sup>11</sup> molecules/cm<sup>2</sup>

		<i>7000 Poly Bag</i>	<i>AMAT SPEC</i>	<i>0250-70699 Natural PE</i>
<b>Anions:</b>		DL*		
Fluoride	( F )	2.0	<2	6.0
Chloride	( Cl )	1.0	28	36.5
Nitrite	( NO <sub>2</sub> )	1.0	<1	1.0
Bromide	( BR )	0.5	<0.5	1.0
Nitrate	( NO <sub>3</sub> )	0.5	1.1	2.0
Sulfate	( SO <sub>4</sub> <sup>2-</sup> )	0.5	<0.5	9.0
Phosphate	( PO <sub>4</sub> <sup>2-</sup> )	0.5	<0.5	2.0
<b>Cations:</b>				
Lithium	( LI )	5.0	<5	8.0
Sodium	( NA )	1.0	3.3	220
Ammonium	( NH <sub>4</sub> )	2.0	2.8	10.0
Potassium	( K )	1.0	1.7	2.5
Magnesium	( MG <sup>2+</sup> )	1.0	8.6	10.5
Calcium	( CA <sup>2+</sup> )	1.0	<1	30.5

- DL = detection limits are in 10<sup>11</sup> molecules/cm<sup>2</sup>

The 7000 Series poly bag tested passed AMAT SPEC 0250-70699 for Ionic Contamination

**Particle Cleanliness Levels IEST-STD-CC1246 (Partial Listing)**

Cleanliness Level	Particle Size (microns)	Maximum allowable concentration limits for particles of stated size and larger -- Particles per 0.1m <sup>2</sup> of surface area or 0.1 liter of gas or liquid (N)
1	1	1
5	1	2.8
5	2	2.3
5	5	1
10	1	8.4
10	2	7
10	5	3
10	10	1
25	2	53
25	5	23
25	15	3.4
25	25	1
50	5	166
50	15	25
50	25	7.3
50	50	1
100	5	1758
100	15	265
100	25	78
100	50	11
100	100	1
200	15	4180
200	25	1230
200	50	169
200	100	15.8
200	200	1
300	25	7450
300	50	1020
300	100	95
300	250	2.2
300	300	1
500	50	11800
500	100	1090
500	250	26.3
500	500	1
750	50	95800
750	100	8910
750	250	213
750	500	6.1
750	750	1
1000	100	42600
1000	250	1020
1000	500	38.7
1000	750	4.7
1000	1000	1