



## HIGH DENSITY POLYETHYLENE TECHNICAL DATASHEET

7000F (FILM GRADE)

PRODUCT AVAILABLE FORM AND PACKAGING

7000 F is a high density polyethylene resin ;a product of bi-modal process from Mitsui Chemicals, Inc. of Japan

### TYPICAL APPLICATION

- ◆ Recommend film thickness at 10-25 micron
- ◆ High tensile strength with good dart impact strength
- ◆ Low gel content
- ◆ Good moisture barrier
- ◆ Food contact applicable
- ◆ Good impact resistance and processability
- ◆ Shopping bag and T-shirt bag
- ◆ Garbage bag
- ◆ Liner bag
- ◆ Enhanced ultra thin film
- ◆ High stiffness
- ◆ Wide service Temperature range, UV resistance

### PROPERTIES

#### Physical properties

Property	Test Method	Value	Unit
<b>Resin Properties</b>			
Melt Flow Rate	ASTM D 1238 @ 190 °C, 2.16 kg	0.04	g/10 min
Density	ASTM D 1505	0.954	g/cm <sup>3</sup>
Melting Point	ASTM D 2117	131	°C
Vicat Softening Point	ASTM D 1525	124	°C
Brittleness Temperature	ASTM D 746	< -60	°C
ESCR	ASTM D 1693 @ 50 °C (Condition: Compression Molded, 25% Igepal)	> 1000	hrs, F50
<b>Film Properties</b>			
Tensile Strength at Yield	ASTM D 638 @ crosshead speed 50mm/min	MD: -, TD: 250*	kg/cm <sup>2</sup>
Tensile Strength at Break	ASTM D 638 @ crosshead speed 50mm/min	MD: 620*, TD: 310*	kg/cm <sup>2</sup>
Tensile Modulus, 2% Secant	ASTM D 638 @ crosshead speed 50mm/min	MD: 8200*, TD: 8000*	kg/cm <sup>2</sup>
Elongation at Break	ASTM D 638 @ crosshead speed 50mm/min	MD : 240*, TD : 450*	%
Elmendorf Tear Strength	ASTM D 1922	MD : 3*, TD : 80*	g
Dart Impact Strength	ASTM D 1709	139*	g

(\*) Properties obtained from film produced on a pilot line , 12 micron, BUR 5:1, MD = Machine Direction, TD = Transverse Direction

Note : Conversion factor for changing unit from kg/cm<sup>2</sup> to MPa is divided by 10.2

### PROCESSING TECHNIQUES

The actual extrusion condition depends on type of using machine, size and film thickness of product required.

Generally, melt temperature should be 190-210 oC with BUR = 3-5 times and frost line height (FLH) = 8-10 times of die diameter.

### Product Technical Assistance

For technical assistance or further information on this product contact MHPC technical team at the address or telephone number as