Technical Data Sheet

DOW™ LDPE 93004 HEALTH+™ Low Density Polyethylene Resin

Description

DOW™ LDPE 93004 HEALTH+™ Low Density Polyethylene Resin is a low density polyethylene barefoot resin designed for blow-fill seal, extrusion blow molding and injection blow molding applications with good flexibility and good chemical resistance.

Main Characteristics

- Good chemical resistance
- Good stiffness

Complies with

- U.S. FDA-DMF
- USP Class VI
- USP 661.1

Consult the regulations for complete details.

Additives

- Slip No
- Antiblock: No
- Processing Aid: No

Properties[1]

Physical	Nominal Value	Unit	Test Method
Density	0.930	g/cm^3	ASTM[2] D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.40	g/10 min	ASTM D1238
Film			
Film Thickness - Tested	50	µm	Internal Method
Film Toughness			ASTM 527-3
MD	61.4	MJ/m^3	
TD	69.1	MJ/m^3	
Secant Modulus			ASTM 527-3
2% Secant, MD	196	MPa	
2% Secant, TD	199	MPa	
Tensile Strength			ASTM 527-3
MD: Yield	12	MPa	
TD: Yield	12.8	MPa	
MD: Break	21.9	MPa	
TD: Break	20.1	MPa	
Tensile Elongation			ASTM 527-3
MD: Break	550	%	
TD: Break	503	%	

Properties (Cont.)

Film	Nominal Value	Unit	Test Method
Dart Drop Impact[3]	111	g	ISO[4] 7765-1/1998
Elmendorf Tear Strength			ASTM D1922
MD	320	g	
TD	272	g	
Thermal			
Vicat Softening Point	109	°C	ASTM D1525
Peak Melting Point	117	°C	ASTM 3895
Optical			
Gloss (45ºC)	62		ASTM D2457
Haze	8.2	%	ASTM D1003
Clarity	61.1	%	ASTM D1746
Extrusion			
Melt Temperature	190 to 200	°C	
Extrusion Notes			

Fabrication Conditions for Blown Film:

- Melt Pressure: 310 bar
- Die Gap: 1 mm
- Melt Temperature: 226°C
- Output: 29 kg/h
- Die Diameter: 150 mm
- Blow-Up Ratio: 2.5
- Screw Speed: 72 rpm
- Frost Line Height: 350 mm

3. Method A
4. ISO: International Standardization Organization