

# DOW™ LDPE 5005

Low Density Polyethylene Resin

The Dow Chemical Company

## Message:

Polyethylene 5005 Low Density is used for fresh milk cartons, liquid/juice containers, dry foods packaging, snack foods packaging, moist foods packaging, and medical packaging. DOW LDPE extrusion coating resins provide optimal neck-in and draw-down performance with minimal taste/odor contribution.

Main Characteristics:

A low melt index coating resin for demanding packaging applications

Complies with:

U.S. FDA 21 CFR 177.1520(c)2.2

Consult the regulations for complete details.

General Information			
Agency Ratings	FDA 21 CFR 177.1520(c) 2.2		
Forms	Particle		
Processing Method	Extrusion coating		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.922	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	5.7	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Seal Initiation Temperature <sup>1</sup>	105	°C	Internal method
Water Vapor Transmission Rate <sup>2</sup>	0.59	g · mm/m <sup>2</sup> /atm/24 hr	ASTM F1249
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	97.2	°C	ASTM D1525
Melting Temperature (DSC)	111	°C	Internal method
Extrusion	Nominal Value	Unit	Test Method
Melt Temperature	316 - 332	°C	
Neck-in (321°C, 25.4 µm)	53.3	mm	Internal method
Maximum production line speed	7.6	m/sec	Internal method
Minimum coating thickness	7.6	µm	Internal method
Minimum coating weight	7.2	g/m <sup>2</sup>	Internal method
Extrusion instructions			
Fabrication Conditions For Extrusion Coating Film: Screw Size: 3.5 in. (89 mm); 30:1 L/D/Size Screw Type: Single Flight with Maddock Mixer Die Gap: 20 mil (0.508 mm) Melt Temperature: 625°F (329°C) Output: 250 lb/hr Screw Speed: 90 rpm			
NOTE			

1.	Temperature at which 1 lb/in (4.4 N/25.4 mm) heat seal strength is achieved.Heat Seal Strengths, Topwave HT Tester 0.5 s dwell, 40 psi bar pressure, pull speed 10 in/min.
2.	1.0 mil (25 µm) coating onto 50 lb Kraft paper

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