

**DOW™ LDPE 5005 Low Density Polyethylene Resin****Description**

DOW™ LDPE 5005 Low Density Polyethylene Resin 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.

Min Characteristics

- A low melt index coating resin for demanding packaging applications

Complies with

- U.S. FDA 21 CFR 177.1520(c)2.2
- Packaging Drug Master File (DMF)

Consult the regulations for complete details.

Additives

- Antiblock: No
- Slip: No
- Processing aid: No

Properties¹

Physical	Nominal Value	Unit	Test Method ²
Density	0.922	g/cm ³	ASTM D792
Base Density ³	0.922	g/cm ³	Internal Method
Melt Index (190°C/2.16kg)	5.7	g/cm ³	ASTM D1238
Films	Nominal Value	Unit	Test Method
Seal Initiation Temperature ⁴	105	°C	Internal Method
Water Vapor Transmission Rate ⁵	0.59	g·mm/m ² /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 to 332	°C	
Maximum Line Speed	7.6	m/sec	Internal Method

1. Typical properties: these are not to be construed as specifications. Users should confirm results by their own tests.
2. ASTM: American Society for Testing and Materials
3. Base Density is estimated using the assumption that every 1000 ppm of antiblock in the finished product raises the density of the polymer by 0.0006 g/cm³. Base density is the estimated density of the polymer if it did not contain any antiblock.
4. 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.
5. 1.0 mil (25 µm) coating onto 50 lb Kraft paper.



Properties (Cont.)

Extrusion	Nominal Value	Unit	Test Method
Minimum Coating Thickness	7.6	μm	Internal Method
Minimum Coating Weight	7.2	g/m ²	Internal Method
Neck-in (610°F (321°C), 1.0 mil (25.4 μm))	53.3	mm	Internal Method

Extrusion Notes

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

