Technical Data Sheet

DOW™ LDPE 748A Low Density Polyethylene Resin

Description

DOW™ LDPE 748A Low Density Polyethylene Resin is a barefoot low-density polyethylene for compounding and stretching/cling film applications.

Complies with

- U.S. FDA 21 CFR 177.1520(c)2.1

Consult the regulations for complete details.

Additives

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

Properties[1]

Physical	Nominal Value	Unit	Test Method[2]
Density	0.921	g/cm³	ASTM D792
Base Density[3]	0.921	g/cm³	Internal Method
Melt Index (190°C/2.16 kg)	7.0	g/cm³	ASTM D1238
Films	**Nominal Value**	**Unit**	**Test Method**
Film Thickness - Tested	25	µm	
Film Puncture Resistance (1.0 mil (25 µm))	2.65	J/cm³	Internal Method
Film Toughness			ASTM D882
MD: 1.0 mil (25 µm)	183	J/cm³	
TD: 1.0 mil (25 µm)	156	J/cm³	
Tensile Strength			ASTM D882
MD: Yield, 1.0 mil (25 µm)	10.6	MPa	
TD: Yield, 1.0 mil (25 µm)	9.99	MPa	
MD: Break, 1.0 mil (25 µm)	27.1	MPa	
TD: Break, 1.0 mil (25 µm)	17.5	MPa	
Tensile Elongation			ASTM D882
MD Break: 1.0 mil (25 µm)	510	%	
TD Break: 1.0 mil (25 µm)	640	%	
Dart Drop Impact (1.0 mil (25 µm))	43	g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD: 1.0 mil (25 µm)	190	g	
TD: 1.0 mil (25 µm)	260	g	

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.

Properties (Cont.)

Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	88.9	°C	ASTM D1525
Melting Temperature (DSC)	110	°C	Internal Method
Optical	**Nominal Value**	**Unit**	**Test Method**
Gloss (45°, 1.00 mil (25.4 µm))	92		ASTM D2457
Haze (1.00 mil (25.4 µm))	1.10	%	ASTM D1003

Extrusion Notes

Fabrication Conditions for Cast Film:

- Screw A: Size: 2.0 in. (51 mm); 30:1 L/D
  - Melt Temperature: 498°F (259°C)
  - Screw Speed: 47 rpm
- Screw B: Size: 2.5 in. (63.5 mm); 30:1 L/D
  - Melt Temperature: 500°F (260°C)
  - Screw Speed: 31 rpm
- Screw C: Size: 2.5 in. (63.5 mm); 30:1 L/D
  - Melt Temperature: 499°F (260°C)
  - Screw Speed: 33 rpm
- Screw D: Size: 2.5 in. (63.5 mm); 30:1 L/D
  - Melt Temperature: 500°F (260°C)
  - Screw Speed: 33 rpm
- Screw E: Size: 2.0 in. (51 mm); 30:1 L/D
  - Melt Temperature: 498°F (259°C)
  - Screw Speed: 37 rpm
- Screw Type: DSB II
- Die Gap: 25 mil (0.025 mm)
- Chill Roll Temperature: 70°F (21°C)
- Melt Temperature: 500°F (260°C)
- Output: 345 lb/hr