Technical Data Sheet

DOW™ LDPE PT 7007 Low Density Polyethylene Resin

Overview

DOW ™LDPE PT 7007 Low Density Polyethylene Resin is a low-density polyethylene suitable designed for extrusion coating applications. DOW™ LDPE PT 7007 Polyethylene Resin has been designed to offer minimum volatile organic carbon (VOC) levels for use in extrusion coating, contributing to low factory emissions and optimal sensory performance.

Sustainability Attribute:

Ecolibrium™ Bio-based materials by DOW

DOW™ LDPE PT 7007 Polyethylene Resin exhibits:

- Excellent draw down.
- Good edge stability.
- Low neck-in.

Note: DOW™ LDPE PT 7007 Polyethylene Resin should comply with U.S. FDA CFR 177.1520(c)2.2 and with EU, No. 10/2011 when used unmodified and processed according to good manufacturing practices for food contact applications. Please contact your nearest office regarding food contact compliance statements. The purchaser remains responsible for determining whether the use complies with all relevant regulations.

Applications:

- Paper.
- Board and foil coatings for packaging.
- Food and non-food.

Physical Properties

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method[1]
Density	0.918	g/cm^3	0.918	g/cm^3	ASTM D792
Melt Index (190°C/2.16 kg)	7.5	g/10 min	7.5	g/10 min	ISO 1133
Mechanical					
Tensile Stress					ISO 527-2
Yield	1160	psi	8.00	MPa	
Break	1450	psi	10.0	MPa	

1. ASTM: American Society for Testing and Materials
ISO: International Standardization Organization

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

Physical Properties (Cont.)

Mechanical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Tensile Strain (Break)	400	%	400	%	ISO 527-2
Films					
Seal Initiation Temperature[2]	221	°F	105	°C	Dow Method
Water Vapor Transmission[3]	17	g/100 in^2/24 hr	260	g/m^2/24 hr	ASTM E398-83
Thermal					
Vicat Softening Temperature	192	°F	89.0	°C	ISO 306/A
Extrusion					
Melt Temperature	518 to 635	°F	270 to 335	°C	
Minimum Coating Weight[4]	3.1	lb/ream	5.0	g/m^2	Dow Method
Neck-in					
--[5]	2.6	in	65.0	mm	
--[6]	2.8	in	70.0	mm	
--[7]	3.9	in	75.0	mm	

2. Temperature required to reach 3 N/15 mm for a 25 g/m^2 coating of DOW™ LDPE PT 7007 Low Density Polyethylene Resin onto paper.
3. 23°C, 90% RH. Divide by coating weight in g/m^2 to obtain actual WVTR, e.g. at 20 g/m^2 DOW™ LDPE PT 7007 Low Density Polyethylene Resin the WVTR is 378/20 = 18.9 g/m^2 day
4. At 320°C set temperature.
5. 100 m/min, 25 g/m^2 coatings at 290°C set temperature.
6. 200 m/min, 25 g/m^2 coatings at 290°C set temperature.
7. 300 m/min, 25 g/m^2 coatings at 290°C set temperature.

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c. use as a critical component in medical devices that support or sustain human life; or
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