



DOW™ LDPE PG 7004 (Extrusion Coating) Low Density Polyethylene Resin

Overview

DOW LDPE™ PG 7004 Polyethylene Resin is typically used in extrusion coating applications. DOW LDPE PG 7004 Polyethylene Resin is designed for processing on conventional LDPE extrusion coating hardware at melt temperatures of 270 to 335°C, preferably less than 290°C, for best sensory performance. DOW LDPE PG 7004 Polyethylene Resin provides low volatile organic carbon (VOC) emissions in extrusion, contributing to low factory emissions and optimal sensory performance.

When processed on suitable hardware, DOW LDPE PG 7004 polyethylene resin exhibits:

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

Complies with:

- U.S. FDA-DMF
- U.S. FDA 21 CFR 177.1520(c)2.2
- EU, No 10/2011
- Canadian HPFB No Objection

Consult the regulations for complete details.

Applications:

- Paper board
- Foil coatings for packaging food and non-food

| Physical | Nominal Value (English) | Nominal Value (SI) | Test Method |
|--|---------------------------------|-----------------------------|--------------|
| Density | 0.922 g/cm ³ | 0.922 g/cm ³ | ASTM D792 |
| Melt Index (190°C/2.16 kg) | 4.1 g/10 min | 4.1 g/10 min | ISO 1133 |
| Mechanical | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Tensile Modulus - 2% Secant | 29600 psi | 204 MPa | ASTM D638 |
| Tensile Strength | | | ASTM D638 |
| Yield | 1740 psi | 12.0 MPa | |
| Ultimate | 1280 psi | 8.80 MPa | |
| Tensile Elongation (Break) | 470 % | 470 % | ASTM D638 |
| Films | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Seal Initiation Temperature ¹ | 230 °F | 110 °C | Dow Method |
| Water Vapor Transmission ² | 15 g/100 in ² /24 hr | 240 g/m ² /24 hr | ASTM E398-83 |
| Thermal | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Vicat Softening Temperature | 208 °F | 98.0 °C | ISO 306/A |
| Melting Temperature | 230 °F | 110 °C | DSC |
| Extrusion | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Melt Temperature | 518 to 635 °F | 270 to 335 °C | |
| Minimum Coating Weight ³ | 12 lb/ream | 20 g/m ² | Dow Method |
| Neck-in ⁴ | 3.0 in | 75.0 mm | Dow Method |

Notes

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

¹ Temperature required to reach 3 N/15 mm for a 25 g/m² coating of LDPE PG 7004 Polyethylene Resin onto paper.

² 38°C, 90% RH
Divide by coating weight in g/m² to obtain actual WVTR.

³ 290°C set temperature.

⁴ 100 m/min, 25 g/m² coatings at 290°C set temperature.

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