



DOW™ LDPE 722

The Dow Chemical Company - Low Density Polyethylene Resin

Wednesday, December 8, 2021

General Information

Product Description

Dow™ LDPE 722 is used in flexible packaging and paperboard coating applications such as liquid/juice, laminate tube, condiment pouches, dry foods packaging, snack foods packaging, moist foods packaging, sugar pouches, lidding stock and medical packaging. DOW LDPE extrusion coating resins provide optimal neck-in and draw-down performance with minimal taste/odor contribution.

DOW Polyethylene 722 is a broad molecular weight distribution homopolymer designed to offer good impact strength and crack resistance, with excellent flexibility. The resin has good processability over a wide range of molding conditions.

- Typical applications include caps/closures
- Good impact, ESCR with excellent flexibility

Complies with:

- CANADIAN HPFB NO OBJECTION (WITH LIMITATIONS)
- EU, No 10/2011
- U.S. FDA 21 CFR 177.1520 (c) 2.2
- U.S. FDA DMF

Consult the regulations for complete details.

General

Material Status	• Commercial: Active		
Regional Availability	• Asia Pacific	• Latin America	• North America
Additive	• Antiblock: No	• Processing Aid: No	• Slip: No
Agency Ratings	• DMF • EU No 10/2011	• FDA 21 CFR 177.1520(c) 2.2 • HPFB (Canada) No Objection ¹	
Forms	• Pellets		
Processing Method	• Extrusion Coating	• Injection Molding	

ASTM & ISO Properties ²

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	0.920	0.920	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	8.0 g/10 min	8.0 g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR) ³			ASTM D1693
122°F (50°C), 100% Igepal, F50	< 1.00 hr	< 1.00 hr	
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Strength ³			ASTM D638
Yield	1200 psi	8.27 MPa	
Break	1400 psi	9.65 MPa	
Tensile Elongation ³			ASTM D638
Yield	4.0 %	4.0 %	
Break	500 %	500 %	
Flexural Modulus - 2% Secant ³	34000 psi	234 MPa	ASTM D790B
Coefficient of Friction	0.60	0.60	ASTM D1894

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Films	Typical Value (English)	Typical Value (SI)	Test Method
Seal Initiation Temperature ⁴	221 °F	105 °C	Internal Method
Water Vapor Transmission Rate	1.7 g·mil/ 100in ² /atm/24 hr	0.67 g·mm/m ² /atm/24 hr	ASTM F1249
Impact	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Impact Strength ^{5, 3}	130 ft·lb/in ²	273 kJ/m ²	ASTM D1822
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Durometer Hardness ³ (Shore D)	43	43	ASTM D2240
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Deflection Temperature Under Load ³ 66 psi (0.45 MPa), Unannealed	99.0 °F	37.2 °C	ASTM D648
Brittleness Temperature ³	-76.0 °F	-60.0 °C	ASTM D746
Vicat Softening Temperature	190 °F	87.8 °C	ASTM D1525
Melting Temperature (DSC)	224 °F	107 °C	Internal Method
Peak Crystallization Temperature (DSC)	204 °F	95.6 °C	Internal Method
Additional Information	Typical Value (English)	Typical Value (SI)	Test Method
Melt Temperature - Recommended	600 to 630 °F	316 to 332 °C	Internal Method

Fabrication Conditions For Extrusion Coating Film:

- Screw Size: 3.5 in. (89 mm); 30:1 L/D
- 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

Processing Information

Extrusion	Typical Value (English)	Typical Value (SI)	Test Method
Maximum Line Speed	25.0 ft/sec	7.6 m/sec	Internal Method
Minimum Coating Thickness	0.30 mil	7.6 µm	Internal Method
Minimum Coating Weight	4.4 lb/ream	7.2 g/m ²	Internal Method
Neck-in (610°F (321°C), 1.0 mil (25.4 µm))	2.0 in	50.8 mm	Internal Method

Notes

¹ With limitations

² Typical properties: these are not to be construed as specifications.

³ Molded and tested in accordance with ASTM D4976.

⁴ Temperature at which 1 lb/in (4.4 N/25.4 mm) heat seal strength is achieved.
Heat Seal Strengths, Topware HT Tester 0.5 S dwell, 40 psi bar pressure, pull speed 250 mm/sec.

⁵ Type S