DOW™ LDPE 722

The Dow Chemical Company - Low Density Polyethylene Resin

Tuesday, November 5, 2019

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		
Availability	• Asia Pacific	• Latin America	• North America
Additive	• Antiblock: No	• Processing Aid: No	• Slip: No
Agency Ratings	• DMF Unspecified Rating • 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	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.920		ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	8.0	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR) [3]			ASTM D1693
122°F, 100% Igepal, F50	< 1.00	hr	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength [3] (Yield)	1200	psi	ASTM D638
Tensile Strength [3] (Break)	1400	psi	ASTM D638
Tensile Elongation [3] (Yield)	4.0	%	ASTM D638
Tensile Elongation [3] (Break)	500	%	ASTM D638
Flexural Modulus - 2% Secant [3]	34000	psi	ASTM D790B
Coefficient of Friction	0.60		ASTM D1894
Films	**Nominal Value**	**Unit**	**Test Method**
Seal Initiation Temperature [4]	221	°F	Internal Method
Water Vapor Transmission Rate	1.7	g·mil/100in²/atm/24 hr	ASTM F1249

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Impact	Nominal Value	Unit	Test Method
Tensile Impact Strength [5, 3]	130	ft·lb/in²	ASTM D1822
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness [3] (Shore D)	43		ASTM D2240
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load [3] (66 psi, Unannealed)	99.0	°F	ASTM D648
Brittleness Temperature [3]	-76.0	°F	ASTM D746
Vicat Softening Temperature	190	°F	ASTM D1525
Melting Temperature (DSC)	224	°F	Internal Method
Peak Crystallization Temperature (DSC)	204	°F	Internal Method
Additional Information	**Nominal Value**	**Unit**	**Test Method**
Melt Temperature - Recommended	600 to 630	°F	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	Nominal Value	Unit	Test Method
Maximum Line Speed	25.0	ft/sec	Internal Method
Minimum Coating Thickness	0.30	mil	Internal Method
Minimum Coating Weight	4.4	lb/ream	Internal Method
Neck-in (610°F, 1.0 mil)	2.0	in	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 pis bar pressure, pull speed 250 mm/sec.

[5] Type S