Dow Plastics

Dow Polyethylene 640I

Low Density Polyethylene Resin

- A barefoot general purpose general liner resin
- For blown and cast film extrusion
- Optimum gauge range: 0.8-3.0 mil
- Complies with U.S. FDA 21 CFR 177.1520 (c) 2.2
  Consult the regulations for complete details.

DOW LDPE 640I Resin is a general purpose liner resin for thin gauge applications requiring good drawdown and excellent toughness.

Physical Properties		Test Method	Values[(1)] English (SI)
Resin Properties			
Melt Index, g/10 min		ASTM D 1238	2.0
Density, g/cc		ASTM D 792	0.9215
DSC Melting Point, °F (°C)		Dow Method	232 (111)
Vicat Softening Point, °F (°C)		ASTM D 1525	207 (97)
Film Properties, 2.0mil (51 µm)			
Puncture Resistance, ft·lbf/in.^{3} (J/cm^3)		Dow Method	35 (3)
Dart Impact (Method A), g		ASTM D 1709	154
Elmendorf Tear, g	MD	ASTM D 1922	498
	CD		284
Tensile Yield, psi (MPa)	MD	ASTM D 882	1790 (12)
	CD		1760 (12)
Ultimate Tensile, psi (MPa)	MD	ASTM D 882	3597 (25)
	CD		3329 (23)
Ultimate Elongation, %	MD	ASTM D 882	417
	CD		665
Toughness, ft·lbf/in.^{3} (J/cm^3)	MD	ASTM D 882	1917 (159)
	CD		2228 (189)
Secant Modulus, 2% psi (MPa)	MD	ASTM D 882	26187 (181)
	CD		30026 (207)
Gloss, 45°		ASTM D 2457	66
Haze, %		ASTM D 1003	7.6

Fabrication Conditions For Blown Film:

- Screw Size: 2.5 in. (63.5 mm) 30:1 L/D
- Screw Type: Single Flight Double Mix
- Die Gap: 40 mil (1.02 mm)
- Melt Temperature: 450°F (199°C)
- Output: 7 lb/hr/in. of die circumference
- Die Diameter: 6 in.
- Blow-Up Ratio: 2.5:1
- Screw Speed: 60 rpm
- Frost Line Height: 25 in. (365 mm)

(1) Typical values, not to be construed as specifications. Users should confirm results by their own tests.

-See "Handling Considerations" attached

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Handling Considerations

Material Safety Data (MSD) sheets for the product are available from Dow Plastics, a business group of The Dow Chemical Company and its subsidiaries, to help customers further satisfy their own safe handling and disposal needs and those that may be required by OSHA. Material Safety Data sheets on Dow products are intended to provide customers with essential information on such topics as Health and Worker Safety, Combustibility, and Disposal Considerations. Such information should be requested from the supplier(s) of any product(s) prior to working with it. As various additives and processing aids used in fabrication have their own safe use profile, their possible influence on handling and disposal must be investigated separately. For "Regulated" uses, such as food contact, your Dow sales representative can obtain compliance letters for specific resins.

Disposal

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As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess, or manage chemicals or plastics, and that manage used drums. For more details, contact The Dow Chemical Company Customer Information Center at 1-800-441-4369. In Mexico, call 95-800-441-4369.

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Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to help ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel will assist customers in dealing with ecological and product safety considerations. Dow product literature, including MSD sheets, should be consulted prior to use of Dow products. Your Dow Plastics sales representative can arrange the proper contacts, or write to Dow Plastics.

Additional Information

For more information in the United States or Canada, call 1-800-441-4369. In Mexico, call 95-800-441-4369.

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