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DOW™ LDPE 780E

The Dow Chemical Company - Low Density Polyethylene Resin

Wednesday, July 19, 2023

General Information

Product Description

LDPE 780E Low Density Polyethylene Resin can be readily processed using conventional injection moulding techniques utilising melt temperatures between 140 and 250°C, a mould temperature between 10 and 50°C, and injection pressure between 50 and 150 MPa.

When properly injection moulded, 780E Low Density Polyethylene Resin exhibit:

- Excellent flow
- Good rigidity
- Good surface gloss

Note: LDPE 780E Low Density Polyethylene Resin should comply with FDA regulation 177.1520 and with most European food contact regulations when used unmodified and processed according to good manufacturing practices for contact applications. Please, contact your nearest Dow office for food contact compliance statements.The purchaser remains responsible for determining whether the use complies with all relevant regulations.

Applications:

- Housewares.
- Toys & leisures.
- Containers.
- Compounding.

Complies with Canadian HPFB No Objection
Complies with U.S. FDA 21 CFR 177.1520

General		
Material Status	• Commercial: Active	
Availability	• Asia Pacific	• Europe
Agency Ratings	• FDA 21 CFR 177.1520	• HPFB (Canada) No Objection
Forms	• Pellets	

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.923	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	20	g/10 min	ISO 1133
Spiral Flow			Internal Method
-- [2]	4.90	cm	
-- [3]	8.50	cm	
Molding Shrinkage - Flow	2.3	%	ASTM D955
Molding Shrinkage - Across Flow	1.5	%	ASTM D955
Environmental Stress-Cracking Resistance (ESCR)			ASTM D1693
Compression Molded	1.40	hr	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus - 2% Secant (Compression Molded)	164	MPa	ISO 527-1
Tensile Stress (Yield, Compression Molded)	8.20	MPa	ISO 527-2
Tensile Stress (Break, Compression Molded)	10.5	MPa	ISO 527-2
Tensile Strain (Break, Compression Molded)	50	%	ISO 527-2
Films	**Nominal Value**	**Unit**	**Test Method**
Tensile Elongation - MD (Break, 200 µm)	700	%	ASTM D882
Tensile Elongation - TD (Break, 200 µm)	750	%	ASTM D882

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Impact	Nominal Value	Unit	Test Method
Tensile Impact Strength	286	kJ/m²	ISO 8256
Hardness	**Nominal Value**	**Unit**	**Test Method**
Shore Hardness (Shore D)	49		ISO 868
Thermal	**Nominal Value**	**Unit**	**Test Method**
Vicat Softening Temperature	93.0	°C	ASTM D1525

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] Injection Pressure: 600 bar

[3] Injection Pressure: 1.20E+3 bar

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