



Sunday, July 24, 2005

DOW LDPE 993I

Dow Plastics - Polyethylene, Low Density

Unit System: English **Actions**[Legend \(Open\)](#)**General Information****Product Description**

- Typical applications include toys, lids, and closures
 - Good gloss, rigidity, excellent flow
 - Complies with U.S. FDA 21 CFR 177.152 (c) 2.1.
- Consult the regulations for complete details

DOW LDPE 993I Polyethylene Resin is a medium molecular weight distribution homopolymer designed to offer good gloss and rigidity with excellent flow characteristics. This resin has good processability over a wide range of molding conditions.

General

Material Status	● Commercial: Active
Availability	● Latin America ● North America
Test Standards Available	● ASTM
Agency Ratings	● FDA 21 CFR 177.1520(c) 2.1 ¹
Forms	● Pellets
Processing Method	● Injection Molding

Properties ²

Physical	Nominal Value	Unit	Test Method
Density - Specific Gravity	0.923	sp gr 23/23°C	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	25.0	g/10 min	ASTM D1238
Enviro. Stress Crack Res	1.00	hr	ASTM D1693
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ³	2% Secant: 27000	psi	ASTM D638
Tensile Strength @ Yield ⁴	1500	psi	ASTM D638
Tensile Strength @ Break ⁴	1700	psi	ASTM D638
Tensile Elongation @ Yld	3.0	%	ASTM D638
Tensile Elongation @ Brk ⁴	40	%	ASTM D638
Flexural Modulus ³	46000	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (73 °F)	7.93	ft-lb/in	ASTM D256
Tensile Impact Strength	120	ft-lb/in ²	ASTM D1822
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness	43		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
DTUL @66psi - Unannealed	104	°F	ASTM D648
Brittle Temperature	-29.0	°F	ASTM D746
Vicat Softening Point	199	°F	ASTM D1525
Peak Crystallization Temperature (DSC)	212	°F	ASTM D3418
Melting Point	230	°F	DSC

Notes

¹ When used unmodified for the manufacture of food contact articles, DOW LDPE 993I will comply with Food Additive Regulations FDA 21 CFR 177.1520(c) 2.1 under the U.S. Food, Drug and Cosmetic Act. Such uses are subject to good manufacturing practices and any other limitations which are part of the statute or regulations. These should be consulted for complete details.

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

³ 0.125 in

⁴ 20 in/min, 0.125 in

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