



## Technical Data Sheet

# DOW™ LDPE 91003 HEALTH+™ Low Density Polyethylene Resin

### Description

DOW™ LDPE 91003 HEALTH+™ Low Density Polyethylene Resin is a barefoot resin designed for blow-fill seal, extrusion blow molding, and injection blow molding applications with good flexibility and good chemical resistance.

### Main Characteristics

- Good flexibility
- Good chemical resistance

### Complies with

- U.S. FDA 21 CFR 177.1520(c) 2.2
- European Pharmacopeia 3.1.3 and 3.1.4
- USP class VI
- Drug Master File Listing
- USP 661.1

Consult the regulations for complete details.

### Additive

- Antiblock: No
- Processing aid: No
- Slip: No

### Properties<sup>1</sup>

Physical	Nominal Value	Unit	Test Method <sup>2</sup>
Density	0.927	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.30	g/10 min	ISO 1133
<b>Films</b>			
Film Thickness - Tested	50	µm	
Film Toughness			ASTM 527-3
MD	56.7	J/cm <sup>3</sup>	
TD	71.8	J/cm <sup>3</sup>	
Secant Modulus			ASTM 527-3
2% Secant, MD	162	MPa	
2% Secant, TD	180	MPa	
Tensile Strength			ASTM 527-3
MD: Yield	9.7	MPa	
TD: Yield	11.6	MPa	
MD: Break	21.1	MPa	
TD: Break	20.0	MPa	

1. Typical properties: these are not to be construed as specifications. Users should confirm results by their own tests.
2. ASTM: American Society for Testing and Materials  
ISO: International Standardization Organization

## Properties (Cont.)

Films	Nominal Value	Unit	Test Method
Tensile Elongation			ASTM 527-3
MD: Break	325	%	
TD: Break	573	%	
Dart Drop Impact	162	g	ISO 7765-1/1998
Elmendorf Tear Strength			ASTM D1922-09
MD	312	g	
TD	381	g	
<b>Thermal</b>			
Vicat Softening Point	102	°C	ASTM D1525
Peak Melting Point	114	°C	ASTM 3895
<b>Optical</b>			
Gloss (45°C)	62		ASTM D2457-08
Haze	7.2	%	ASTM D1003-11
Clarity	60.3	%	ASTM 1746
<b>Extrusion Notes</b>			
Fabrication Conditions for Blown Film:			
<ul style="list-style-type: none"><li>• Melt Pressure: 245 bar</li><li>• Die Gap: 1 mm</li><li>• Melt Temperature: 226°C</li><li>• Output: 29 kg/h</li><li>• Die Diameter: 150 mm</li><li>• Blow-up Ratio: 2.5:1</li><li>• Screw Speed: 94 rpm</li><li>• Frost Line Height: 350 mm</li></ul>			

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