



# DOW HDPE DGDH-1059 NT 7 High Density Polyethylene Resin

**Overview** DOW DGDH-1059 NT 7 High Density Polyethylene Resin is supplied in pelleted form. It is recommended in applications where protection against oxygen and moisture is critical. This includes applications such as deli wraps, food packaging, cereal box liners, and other similar applications. This resin is excellent for multi-wall applications.

- Main Characteristics:
- Blown film extrusion
  - Complies with U.S. FDA 21 CFR 177.1520 (c) 2.2.
  - Consult the regulations for complete details.

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.961 g/cm <sup>3</sup>	0.961 g/cm <sup>3</sup>	ASTM D792
Melt Index			ASTM D1238
190°C/2.16 kg	0.85 g/10 min	0.85 g/10 min	
190°C/21.6 kg	57 g/10 min	57 g/10 min	

Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	3.00 mil	76.2 µm	
Tensile Strength			ASTM D882
MD: Yield, 3.00 mil (76.2 µm)	5000 psi	34.5 MPa	
TD: Yield, 3.00 mil (76.2 µm)	5100 psi	35.2 MPa	
Tensile Elongation			ASTM D882
MD: Break, 3.00 mil (76.2 µm)	330 %	330 %	
TD: Break, 3.00 mil (76.2 µm)	410 %	410 %	
Dart Drop Impact (3.00 mil (76.2 µm))	130 g	130 g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD: 3.00 mil (76.2 µm)	18 g	18 g	
TD: 3.00 mil (76.2 µm)	50 g	50 g	
Oxygen Permeability			
3.00 mil (76.2 µm), 50% RH	90 cm <sup>3</sup> ·mil/100in <sup>2</sup> /atm/24 hr	35 cm <sup>3</sup> ·mm/m <sup>2</sup> /at Dow Method m/24 hr	
73°F (23°C), 3.00 mil (76.2 µm)	90 cm <sup>3</sup> ·mil/100in <sup>2</sup> /atm/24 hr	35 cm <sup>3</sup> ·mm/m <sup>2</sup> /at ASTM D3985 <sup>1</sup> m/24 hr	
Water Vapor Transmission	0.065 g/100 in <sup>2</sup> /24 hr	1.0 g/m <sup>2</sup> /24 hr	ASTM E96

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	266 °F	130 °C	ASTM D1525
Melting Temperature (DSC)	271 °F	133 °C	Dow Method
Peak Crystallization Temperature (DSC)	246 °F	119 °C	Dow Method

Extrusion	Nominal Value (English)	Nominal Value (SI)
Melt Temperature	375 to 400 °F	191 to 204 °C

### Extrusion Notes

Fabrication Conditions For Blown Film:

- Conventional film extrusion equipment with only minor machine modifications for optimum use.
- Melt Temperature: 375-400°F (190-205°C)
- Blow-Up Ratio: 1.8 to 3.2

### Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

<sup>1</sup> Dry

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