



# DOWLEX™ GM 8051G

## Polyethylene Resin

### Overview

DOWLEX™ GM 8051G Polyethylene Resin is designed for use in a wide variety of film applications, in special for FFS and lamination multilayered films combining excellent optical properties, mechanicals and an additive package designed to enhance COF stability.

#### Main Characteristics

- High toughness, processability and optical properties
- Fully formulated, enhanced COF stability

#### Complies with:

- U.S. FDA FCN 741

Consult the regulations for complete details.

#### Additives:

- Slip: Yes
- Antiblock: Yes

### Additive

- Antiblock: 2500 ppm
- Slip: 900 ppm
- Processing Aid: No

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.921 g/cm <sup>3</sup>	0.921 g/cm <sup>3</sup>	ASTM D792
Base Density <sup>1</sup>	0.919 g/cm <sup>3</sup>	0.919 g/cm <sup>3</sup>	Dow Method
Melt Index (190°C/2.16 kg)	0.90 g/10 min	0.90 g/10 min	ASTM D1238
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	2.0 mil	50 µm	
Film Puncture Resistance	346 ft·lb/in <sup>3</sup>	28.6 J/cm <sup>3</sup>	Dow Method
Secant Modulus			
2% Secant, MD	25800 psi	178 MPa	
2% Secant, TD	29400 psi	203 MPa	
Tensile Strength			ASTM D882
MD : Yield	1040 psi	7.20 MPa	
TD : Yield	1070 psi	7.40 MPa	
MD : Break	6290 psi	43.4 MPa	
TD : Break	5700 psi	39.3 MPa	
Tensile Elongation			ASTM D882
MD : Break	830 %	830 %	
TD : Break	850 %	850 %	
Dart Drop Impact	360 g	360 g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD	740 g	740 g	
TD	890 g	890 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	226 °F	108 °C	ASTM D1525
Melting Temperature (DSC)	250 °F	121 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°, 1.97 mil (50.0 µm))	63	63	ASTM D2457
Haze (1.97 mil (50.0 µm))	11 %	11 %	ASTM D1003



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## Extrusion Notes

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### Fabrication Conditions For Blown Film:

- Machine: Monolayer blown film extrusion line
- Monolayer Film (50 microns)
- Screw Size: 25 mm 25:1 L/D
- Die Gap: 1.8 mm
- Output: 15 kg/hr
- Die Diameter: 80mm
- Blow-up Ratio: 2.5 : 1

## Notes

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

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<sup>1</sup> Base density is estimated using the assumption that every 1000 ppm of antiblock in the finished product raises the density of the polymer by 0.0006 g/cm<sup>3</sup>. Base density is the estimated density of the polymer if it did not contain any antiblock.

