



# DOW™ DGDA-5310 NT

## Medium Density Polyethylene Resin

### Overview

DOW™ DGDA-5310 GMB is a Medium Density Polyethylene resin designed to cover the demanding geomembrane market that is manufactured by blown film extrusion. It has excellent mechanical properties, both in tensile and tear and resistance to cracking in an aggressive environment, complying extensively with the requirements of GM13. Utilizing the highest density MDPE allows gives DGDA-5310 NT low product permeability, providing an excellent barrier to water and other liquid media. Thanks to its medium density, the Dow resin facilitates the winding process during extrusion and the adaptation to the irregularities of the terrain during the installation of the geomembranes.

Principle Characteristics:

- Resin designed for geomembranes
- Excellent processability in high thickness
- Excellent ESCR and oxidation resistance
- Meets GM Standard 13

### Additive

- Antiblock: No
- Slip: No
- Processing Aid: No

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density (Natural)	0.939 g/cm <sup>3</sup>	0.939 g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate			ASTM D1238
190°C/5.0 kg	0.38 g/10 min	0.38 g/10 min	
190°C/21.6 kg	11 g/10 min	11 g/10 min	
Environmental Stress-Cracking Resistance (ESCR) <sup>1</sup>			ASTM D1693
122°F (50°C), 10% Igepal, F0	2000 hr	2000 hr	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			
Yield <sup>2</sup>	> 2760 psi	> 19.0 MPa	ASTM D638
Break	4350 psi	30.0 MPa	ISO 527-2
Tensile Elongation <sup>2</sup> (Break)	> 800 %	> 800 %	ASTM D638
Flexural Modulus <sup>3,4</sup>	116000 psi	800 MPa	ASTM D790B
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Izod Impact - Resistance	82 g	82 g	ASTM 2565
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Brittleness Temperature <sup>5,2</sup>	< -103 °F	< -75.0 °C	ASTM D746
Oxidation Induction Time (392°F (200°C))	> 110 min	> 110 min	

### 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> with slot

<sup>2</sup> Film extruded using natural resins and carbon black masterbatch DFBF-0092 (6.5 wt. %) under proper conditions then compressed into molded parts prepared from pipe according to ASTM D 4703 Procedure C. Properties will vary with changes in molding conditions and aging time. Data generated based on ASTM F1473 at Dow facility

<sup>3</sup> Method I (3 point load)

<sup>4</sup> Film extruded using natural resins and carbon black masterbatch DFBF-0092 (6.5 wt. %) under proper conditions then compressed into molded parts prepared from pipe according to ASTM D 4703 Procedure C. Properties will vary with changes in molding conditions and aging time. Data generated based on ASTM F1473 at Dow facility.

<sup>5</sup> Procedure A

