



## DOWLEX™ 2645G

### Polyethylene Resin

#### Overview

DOWLEX™ Polyethylene Resin is designed for the production of a wide variety of film applications. Films made from this resin exhibit a combination of good toughness and tear resistance.

Complies with:

- U.S. FDA FCN 741
- HPFB (Canada), No Objection
- EU, No 10/2011

Consult the regulations for complete details.

#### Additive

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

| Physical                                   | Nominal Value (English)   | Nominal Value (SI)      | Test Method             |
|--------------------------------------------|---------------------------|-------------------------|-------------------------|
| Density                                    | 0.919 g/cm <sup>3</sup>   | 0.919 g/cm <sup>3</sup> | ASTM D792               |
| Base Density                               | 0.919 g/cm <sup>3</sup>   | 0.919 g/cm <sup>3</sup> | Dow Method <sup>1</sup> |
| 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                   | 51 µm                   |                         |
| Film Puncture Resistance (2.0 mil (51 µm)) | 201 ft-lb/in <sup>3</sup> | 16.6 J/cm <sup>3</sup>  | Dow Method              |
| Secant Modulus                             |                           |                         | ASTM D882               |
| 2% Secant, MD: 2.0 mil (51 µm)             | 24400 psi                 | 168 MPa                 |                         |
| 2% Secant, TD: 2.0 mil (51 µm)             | 34500 psi                 | 238 MPa                 |                         |
| Tensile Strength                           |                           |                         | ASTM D882               |
| MD: Yield, 2.0 mil (51 µm)                 | 2060 psi                  | 14.2 MPa                |                         |
| TD: Yield, 2.0 mil (51 µm)                 | 2120 psi                  | 14.6 MPa                |                         |
| MD: Break, 2.0 mil (51 µm)                 | 7080 psi                  | 48.8 MPa                |                         |
| TD: Break, 2.0 mil (51 µm)                 | 5680 psi                  | 39.2 MPa                |                         |
| Tensile Elongation                         |                           |                         | ASTM D882               |
| MD: Break, 2.0 mil (51 µm)                 | 620 %                     | 620 %                   |                         |
| TD: Break, 2.0 mil (51 µm)                 | 740 %                     | 740 %                   |                         |
| Dart Drop Impact (2.0 mil (51 µm))         | 300 g                     | 300 g                   | ASTM D1709A             |
| Elmendorf Tear Strength                    |                           |                         | ASTM D1922              |
| MD: 2.0 mil (51 µm)                        | 720 g                     | 720 g                   |                         |
| TD: 2.0 mil (51 µm)                        | 1000 g                    | 1000 g                  |                         |
| Thermal                                    | Nominal Value (English)   | Nominal Value (SI)      | Test Method             |
| Vicat Softening Temperature                | 225 °F                    | 107 °C                  | ASTM D1525              |
| Melting Temperature (DSC)                  | 248 °F                    | 120 °C                  | Dow Method              |
| Optical                                    | Nominal Value (English)   | Nominal Value (SI)      | Test Method             |
| Gloss (45°, 2.00 mil (50.8 µm))            | 63                        | 63                      | ASTM D2457              |
| Haze (2.00 mil (50.8 µm))                  | 12 %                      | 12 %                    | ASTM D1003              |

#### Extrusion Notes

Fabrication Conditions For Blown Film:

- Screw Size: 2.5 in. (63.5 mm) 30:1L/D
- Screw Type: DSBII
- Die Gap: 70 mil (1.8 mm)
- Output: 10 lb/hr/in. of die circumference
- Die Diameter: 6 in.
- 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.

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