



## DOWLEX™ 2078G

The Dow Chemical Company - Polyethylene Resin

Tuesday, November 5, 2019

### General Information

#### Product Description

- Linear Low Density Polyethylene
- Good processability at narrow die gaps
- High strength in food applications

Complies with:

- U.S. FDA 21 CFR 177.1520 (c) 3.2a.
- Canadian HPFB No Objection (With Limitations)
- EU, No 10/2011

Consult the regulations for complete details.

#### General

|                   |                                                                                         |
|-------------------|-----------------------------------------------------------------------------------------|
| Material Status   | • Commercial: Active                                                                    |
| Availability      | • North America                                                                         |
| Additive          | • Antiblock: No • Processing Aid: Yes • Slip: No                                        |
| Agency Ratings    | • EU No 10/2011 • FDA 21 CFR 177.1520(c) 3.2a • HPFB (Canada) No Objection <sup>1</sup> |
| Forms             | • Pellets                                                                               |
| Processing Method | • Blown Film                                                                            |

### ASTM & ISO Properties <sup>2</sup>

| Physical                                  | Nominal Value | Unit                  | Test Method     |
|-------------------------------------------|---------------|-----------------------|-----------------|
| Density / Specific Gravity                | 0.922         |                       | ASTM D792       |
| Melt Mass-Flow Rate (190°C/2.16 kg)       | 1.0           | g/10 min              | ASTM D1238      |
| Films                                     | Nominal Value | Unit                  | Test Method     |
| Film Thickness - Tested                   | 1             | mil                   |                 |
| Film Puncture Resistance (0.80 mil)       | 175           | ft-lb/in <sup>3</sup> | Internal Method |
| Film Toughness - MD (0.80 mil)            | 973           | ft-lb/in <sup>3</sup> | ASTM D882       |
| Film Toughness - TD (0.80 mil)            | 1150          | ft-lb/in <sup>3</sup> | ASTM D882       |
| Secant Modulus - 2% Secant, MD (0.80 mil) | 26200         | psi                   | ASTM D882       |
| Secant Modulus - 2% Secant, TD (0.80 mil) | 29500         | psi                   | ASTM D882       |
| Tensile Strength - MD (Yield, 0.80 mil)   | 1500          | psi                   | ASTM D882       |
| Tensile Strength - TD (Yield, 0.80 mil)   | 1620          | psi                   | ASTM D882       |
| Tensile Strength - MD (Break, 0.80 mil)   | 5720          | psi                   | ASTM D882       |
| Tensile Strength - TD (Break, 0.80 mil)   | 4490          | psi                   | ASTM D882       |
| Tensile Elongation - MD (Break, 0.80 mil) | 470           | %                     | ASTM D882       |
| Tensile Elongation - TD (Break, 0.80 mil) | 660           | %                     | ASTM D882       |
| Dart Drop Impact (0.80 mil)               | 160           | g                     | ASTM D1709A     |
| Elmendorf Tear Strength - MD (0.80 mil)   | 230           | g                     | ASTM D1922      |
| Elmendorf Tear Strength - TD (0.80 mil)   | 610           | g                     | ASTM D1922      |
| Thermal                                   | Nominal Value | Unit                  | Test Method     |
| Vicat Softening Temperature               | 219           | °F                    | ASTM D1525      |
| Melting Temperature (DSC)                 | 252           | °F                    | Internal Method |
| Optical                                   | Nominal Value | Unit                  | Test Method     |
| Gloss (45°, 0.800 mil)                    | 58            |                       | ASTM D2457      |

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| Optical          | Nominal Value | Unit | Test Method |
|------------------|---------------|------|-------------|
| Haze (0.800 mil) | 8.00          | %    | ASTM D1003  |

### Processing Information

| Extrusion        | Nominal Value | Unit |
|------------------|---------------|------|
| Melt Temperature | 425           | °F   |

#### Extrusion Notes

Fabrication Conditions For Blown Film:

- Screw Size: 2.5 in. (63.5 mm); 24:1 L/D
- Screw Type: MC-4 Barrier
- Die Gap: 40 mil (1 mm)
- Melt Temperature: 425°F (218°C)
- Output: 10 lb/hr/in. of die circumference
- Die Diameter: 6 in.
- Blow-Up Ratio: 2.5:1
- Screw Speed: 85 rpm
- Frost Line Height: 20 in. (508 mm)

#### Notes

<sup>1</sup> With limitations

<sup>2</sup> Typical properties: these are not to be construed as specifications.