



## DOW™ LDPE 535I

The Dow Chemical Company - Low Density Polyethylene Resin

Tuesday, November 5, 2019

### General Information

#### Product Description

- Complies with U.S. FDA 21 CFR 177.1520(c) 2.2
- Complies with Canadian HPFB No Objection (With Limitations)
- Complies with EU, No 10/2011
- Consult the regulations for complete details

#### General

|                   |                      |                              |                                           |
|-------------------|----------------------|------------------------------|-------------------------------------------|
| Material Status   | • Commercial: Active |                              |                                           |
| Availability      | • Latin America      | • North America              |                                           |
| Additive          | • Antiblock: No      | • Processing Aid: No         | • Slip: No                                |
| Agency Ratings    | • EU No 10/2011      | • FDA 21 CFR 177.1520(c) 2.2 | • 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               | 0.927         |                       | ASTM D792       |
| Melt Mass-Flow Rate (190°C/2.16 kg)      | 1.9           | g/10 min              | ASTM D1238      |
| Films                                    | Nominal Value | Unit                  | Test Method     |
| Film Thickness - Tested                  | 2             | mil                   |                 |
| Film Puncture Resistance (2.0 mil)       | 35.0          | ft-lb/in <sup>3</sup> | Internal Method |
| Film Toughness - MD (2.0 mil)            | 2370          | ft-lb/in <sup>3</sup> | ASTM D882       |
| Film Toughness - TD (2.0 mil)            | 2510          | ft-lb/in <sup>3</sup> | ASTM D882       |
| Tensile Strength - MD (Yield, 2.0 mil)   | 1970          | psi                   | ASTM D882       |
| Tensile Strength - TD (Yield, 2.0 mil)   | 1990          | psi                   | ASTM D882       |
| Tensile Strength - MD (Break, 2.0 mil)   | 3620          | psi                   | ASTM D882       |
| Tensile Strength - TD (Break, 2.0 mil)   | 3060          | psi                   | ASTM D882       |
| Tensile Elongation - MD (Break, 2.0 mil) | 550           | %                     | ASTM D882       |
| Tensile Elongation - TD (Break, 2.0 mil) | 770           | %                     | ASTM D882       |
| Dart Drop Impact (2.0 mil)               | 86            | g                     | ASTM D1709A     |
| Elmendorf Tear Strength - MD (2.0 mil)   | 360           | g                     | ASTM D1922      |
| Elmendorf Tear Strength - TD (2.0 mil)   | 470           | g                     | ASTM D1922      |
| Thermal                                  | Nominal Value | Unit                  | Test Method     |
| Vicat Softening Temperature              | 208           | °F                    | ASTM D1525      |
| Melting Temperature (DSC)                | 237           | °F                    | Internal Method |
| Optical                                  | Nominal Value | Unit                  | Test Method     |
| Gloss (45°, 2.00 mil)                    | 72            |                       | ASTM D2457      |

### Processing Information

| Extrusion        | Nominal Value | Unit |
|------------------|---------------|------|
| Melt Temperature | 421           | °F   |

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### Extrusion Notes

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Fabrication Conditions For Blown Film:

- Screw Size: 2.5 in. (63.5 mm); 24:1 L/D
- Screw Type: Single Flight with Maddock Mixer
- Die Gap: 40 mil (1.0 mm)
- Melt Temperature: 420 °F (216 °C)
- Output: 10 lb/hr/in. of die circumference
- Die Diameter: 6 in.
- Blow-Up Ratio: 2.5:1

### Notes

<sup>1</sup> With limitations

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

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