



## DOW™ LDPE 91015 HEALTH+™ Low Density Polyethylene Resin

### Description

DOW™ LDPE 91015 HEALTH+™ Low Density Polyethylene Resin is a low density polyethylene barefoot resin designed for injection blow molding, extrusion blow molding, and blow-fill-seal applications with good flexibility and good chemical resistance. It is also suitable for medical packaging films.

### Main Characteristics

- Good flexibility
- Good chemical resistance

### Complies with

- U.S. FDA 21 CFR 177.1520(c) 2.2
- Europe Commission Regulation (EU) No 10/2011 (See NOTES)
- European Pharmacopeia 3.1.3 and 3.1.4

Consult the regulations for complete details.

### Additive

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

### Properties<sup>1</sup>

| Physical                                  | Nominal Value | Unit              | Test Method <sup>2</sup> |
|---|---------------|-------------------|--------------------------|
| Density                                   | 0.919         | g/cm <sup>3</sup> | ASTM D792                |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 1.5           | g/10 min          | ISO 1133                 |
| <b>Films</b>                              |               |                   |                          |
| Film Thickness - Tested                   | 50            | µm                |                          |
| Film Toughness                            |               |                   | ASTM 527-3               |
| MD  | 40.8          | J/cm <sup>3</sup> |                          |
| TD  | 53.5          | J/cm <sup>3</sup> |                          |
| Secant Modulus                            |               |                   | ASTM 527-3               |
| 2% Secant, MD                             | 221.6         | MPa               |                          |
| 2% Secant, TD                             | 121.8         | MPa               |                          |
| Tensile Strength                          |               |                   | ASTM 527-3               |
| MD: Yield                                 | 7.6           | MPa               |                          |
| TD: Yield                                 | 8.8           | MPa               |                          |
| MD: Break                                 | 17.9          | MPa               |                          |
| TD: Break                                 | 15.8          | MPa               |                          |

1. Typical properties: these are not to be construed as specifications. Users should confirm results by their own tests.
2. ASTM: American Society for Testing and Materials  
ISO: International Standardization Organization

## Properties (Cont.)

| Films   | Nominal Value | Unit | Test Method <sup>2</sup> |
|---|---------------|------|--------------------------|
| Tensile Elongation  |               |      |                          |
| MD: Break   | 277           | %    |                          |
| TD: Break   | 538           | %    |                          |
| Dart Drop Impact  | 149           | g    | ISO 7765-1/1998          |
| Elmendorf Tear Strength   |               |      | ASTM D1922-09            |
| MD  | 241           | g    |                          |
| TD  | 222           | g    |                          |
| <b>Optical</b>  |               |      |                          |
| Gloss (45°C)  | 73            |      | ASTM D2457-08            |
| Haze  | 7             | %    | ASTM D1003-11            |
| <b>Extrusion Notes</b>  |               |      |                          |
| Fabrication Conditions for Blown Film:  |               |      |                          |
| <ul style="list-style-type: none"><li>• Melt Pressure: 199 bar</li><li>• Die Gap: 1 mm</li><li>• Melt Temperature: 191°C</li><li>• Output: 30 kg/h</li><li>• Die Diameter: 150 mm</li><li>• Blow-up Ratio: 2.5:1</li><li>• Screw Speed: 180 rpm</li><li>• Frost Line Height: 400 mm</li></ul> |               |      |                          |

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