

Technical Data Sheet

Lupolen 2221F



Low Density Polyethylene

Product Description

Lupolen 2221F is a fractional melt index homopolymer LDPE resin designed for film applications requiring an excellent balance of clarity, stiffness, shrink and strength. 2221F is selected by customers for collation shrink films, pallet shrink films, packaging films and heavy duty films where clarity and stiffness are important. 2221F contains an antioxidant.

Regulatory Status

For regulatory compliance information, see Lupolen 2221F [Product Stewardship Bulletin \(PSB\) and Safety Data Sheet \(SDS\)](#).

| | |
|--------------------------|--|
| Status | Commercial: Active |
| Availability | Africa-Middle East; Asia-Pacific |
| Application | Bags & Pouches; Clarity Film; Film Wrap; Food Packaging Film; Heavy Duty Packaging; Industrial Film; Lamination Film; Shrink Film; Surface Protection Film |
| Market | Flexible Packaging |
| Processing Method | Blown Film |

| Typical Properties | Nominal Value | Units | Test Method |
|----------------------------------|---------------|-------------------|-------------|
| Physical | | | |
| Melt Flow Rate, (190 °C/2.16 kg) | 0.80 | g/10 min | ASTM D1238 |
| Base Resin Density, (23 °C) | 0.9220 | g/cm ³ | ASTM D1505 |
| Product Density, (23 °C) | 0.9220 | g/cm ³ | ASTM D1505 |
| Film | | | |
| Dart Drop Impact Strength, F50 | 150 | g | ASTM D1709 |
| Tensile Strength at Break | | | |
| MD | 25 | MPa | ASTM D882 |
| TD | 21 | MPa | ASTM D882 |
| Tensile Strength at Yield | | | |
| MD | 11 | MPa | ASTM D882 |
| TD | 12 | MPa | ASTM D882 |
| Tensile Elongation at Break | | | |
| MD | 400 | % | ASTM D882 |
| TD | 550 | % | ASTM D882 |
| 1% Secant Modulus | | | |
| MD | 220 | MPa | ASTM D882 |
| TD | 250 | MPa | ASTM D882 |
| Elmendorf Tear Strength | | | |
| MD | 270 | g | ASTM D1922 |
| TD | 290 | g | ASTM D1922 |
| Optical | | | |
| Haze | 6.5 | % | ASTM D1003 |
| Gloss | 72 | | ASTM D2457 |
| Additive | | | |

| | | |
|-----------|------|------------|
| Slip | None | LYB Method |
| Antiblock | None | LYB Method |

Notes

Data obtained from 50 micron film produced on a 50 mm extruder with a 100 mm die, 205°C melt temperature, 2.5:1 BUR, 0.635 mm die gap at 27 kg/hr.

These are typical property values not to be construed as specification limits.

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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