

# Technical Data Sheet

## Petrothene NA345013



Low Density Polyethylene

### Product Description

Petrothene NA345 is a series of homopolymer resins that combine premium clarity with strength and stiffness. In addition, NA345 exhibits good impact strength on both flat and creased film. NA345 is selected by customers for textile packaging, light produce, bread bags and other thin packaging films enhanced by clarity and sparkle.

### Regulatory Status

For regulatory compliance information, see Petrothene NA345013 [Product Stewardship Bulletin \(PSB\)](#) and [Safety Data Sheet \(SDS\)](#).

|                          |                       |
|--------------------------|-----------------------|
| <b>Status</b>            | Commercial: Active    |
| <b>Availability</b>      | North America         |
| <b>Application</b>       | Clarity Film          |
| <b>Market</b>            | Flexible Packaging    |
| <b>Processing Method</b> | Blown Film; Cast Film |

| Typical Properties               | Nominal Value | English Units     | Nominal Value | SI Units          | Test Method |
|----------------------------------|---------------|-------------------|---------------|-------------------|-------------|
| <b>Physical</b>                  |               |                   |               |                   |             |
| Melt Flow Rate, (190 °C/2.16 kg) | 1.8           | g/10 min          | 1.8           | g/10 min          | ASTM D1238  |
| Base Resin Density, (23 °C)      | 0.921         | g/cm <sup>3</sup> | 0.921         | g/cm <sup>3</sup> | ASTM D1505  |
| <b>Film</b>                      |               |                   |               |                   |             |
| Dart Drop Impact Strength, F50   | 90            | g                 | 90            | g                 | ASTM D1709  |
| Tensile Strength at Break        |               |                   |               |                   |             |
| MD                               | 4000          | psi               | 27.6          | MPa               | ASTM D882   |
| TD                               | 3400          | psi               | 23.4          | MPa               | ASTM D882   |
| Tensile Strength at Yield        |               |                   |               |                   |             |
| MD                               | 1500          | psi               | 10.3          | MPa               | ASTM D882   |
| TD                               | 1600          | psi               | 11.0          | MPa               | ASTM D882   |
| Tensile Elongation at Break      |               |                   |               |                   |             |
| MD                               | 300           | %                 | 300           | %                 | ASTM D882   |
| TD                               | 500           | %                 | 500           | %                 | ASTM D882   |
| 1% Secant Modulus                |               |                   |               |                   |             |
| MD                               | 26000         | psi               | 179           | MPa               | ASTM D882   |
| TD                               | 30000         | psi               | 207           | MPa               | ASTM D882   |
| Elmendorf Tear Strength          |               |                   |               |                   |             |
| MD                               | 360           | g                 | 360           | g                 | ASTM D1922  |
| TD                               | 200           | g                 | 200           | g                 | ASTM D1922  |
| <b>Thermal</b>                   |               |                   |               |                   |             |
| Vicat Softening Temperature      | 212           | °F                | 100           | °C                | ASTM D1525  |
| <b>Optical</b>                   |               |                   |               |                   |             |
| Haze                             | 5.0           | %                 | 5.0           | %                 | ASTM D1003  |

As measured on NA345196 (medium slip, medium antiblock).

|  |      |      |            |
|--|------|------|------------|
| Gloss, (45°)   | 70   | 70   | ASTM D2457 |
| As measured on NA345196 (medium slip, medium antiblock). |      |      |            |
| <b>Additive</b>  |      |      |            |
| Slip   | None | None | LYB Method |
| Antiblock  | None | None | LYB Method |

| <b>Product</b> | <b>Slip(ppm)</b> | <b>Antiblock (ppm)</b> |
|----------------|------------------|------------------------|
| NA345013       | None             | None                   |
| NA345184       | None             | 1500                   |
| NA345196       | 750              | 1500                   |

### Notes

Film data obtained from sample produced on a 3 1/2" (89mm) blown film line, commercially available 8" (203 mm) die, 375°F (191°C) melt extrusion temperature, 2:1 BUR, 1.25 mil (32 micron) gauge, 0.025" die gap at 130 lbs/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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- (ii) film, overwrap and/or product packaging that is considered a part or component of one of the aforementioned medical devices;
- (iii) packaging in direct contact with a pharmaceutical active ingredient and/or dosage form that is intended for inhalation, injection, intravenous, nasal, ophthalmic (eye), digestive, or topical (skin) administration;
- (iv) tobacco related products and applications, electronic cigarettes and similar devices.
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