

**Product Description**

*Petrothene* NA983085 is a low density homopolymer resin selected by customers for use in shrink packaging, bundling, pallet wrap and heavy-duty liner applications. Excellent bubble stability, melt strength, impact and shrinkage are key attributes of NA983085.

**Regulatory Status**

For regulatory compliance information, see *Petrothene* NA983085 [Product Stewardship Bulletin \(PSB\)](#) and [Safety Data Sheet \(SDS\)](#).

|                          |                                                                                                                                                                     |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Status</b>            | Commercial: Active                                                                                                                                                  |
| <b>Availability</b>      | North America                                                                                                                                                       |
| <b>Application</b>       | Agriculture Film; Bags & Pouches; Can Liners; Film Wrap; Food Packaging Film; Heavy Duty Packaging; Liner Film; Shrink Film; Specialty Film; Textile Packaging Film |
| <b>Market</b>            | Flexible Packaging                                                                                                                                                  |
| <b>Processing Method</b> | Blown Film                                                                                                                                                          |

| Typical Properties                           | Nominal Value | English Units     | Nominal Value | SI Units          | Test Method |
|----------------------------------------------|---------------|-------------------|---------------|-------------------|-------------|
| <b>Physical</b>                              |               |                   |               |                   |             |
| Melt Flow Rate, (190 °C/2.16 kg)             | 0.25          | g/10 min          | 0.25          | g/10 min          | ASTM D1238  |
| Base Resin Density, (23 °C)                  | 0.920         | g/cm <sup>3</sup> | 0.920         | g/cm <sup>3</sup> | ASTM D1505  |
| Product Density, (23 °C)                     | 0.922         | g/cm <sup>3</sup> | 0.922         | g/cm <sup>3</sup> | ASTM D1505  |
| <b>Mechanical</b>                            |               |                   |               |                   |             |
| Tensile Strength at Break                    | 2600          | psi               | 17.9          | MPa               | ASTM D638   |
| Tensile Strength at Yield                    | 1420          | psi               | 9.79          | MPa               | ASTM D638   |
| Tensile Elongation at Break                  | 700           | %                 | 700           | %                 | ASTM D638   |
| Tensile Elongation at Yield                  | 100           | %                 | 100           | %                 | ASTM D638   |
| <b>Film</b>                                  |               |                   |               |                   |             |
| Dart Drop Impact Strength, F50               | 180           | g                 | 180           | g                 | ASTM D1709  |
| Tensile Strength at Break                    |               |                   |               |                   |             |
| MD                                           | 3000          | psi               | 20.7          | MPa               | ASTM D882   |
| TD                                           | 2800          | psi               | 19.3          | MPa               | ASTM D882   |
| Tensile Elongation at Break                  |               |                   |               |                   |             |
| MD                                           | 310           | %                 | 310           | %                 | ASTM D882   |
| TD                                           | 430           | %                 | 430           | %                 | ASTM D882   |
| 1% Secant Modulus                            |               |                   |               |                   |             |
| MD                                           | 30000         | psi               | 207           | MPa               | ASTM D882   |
| TD                                           | 35000         | psi               | 241           | MPa               | ASTM D882   |
| <b>Hardness</b>                              |               |                   |               |                   |             |
| Shore Hardness, (Shore D)                    | 45            |                   | 45            |                   | ASTM D2240  |
| <b>Thermal</b>                               |               |                   |               |                   |             |
| Vicat Softening Temperature                  | 199           | °F                | 93            | °C                | ASTM D1525  |
| Low Temperature Brittleness, F <sub>50</sub> | -103          | °F                | -75           | °C                | ASTM D746   |
| <b>Additive</b>                              |               |                   |               |                   |             |

|           |          |          |            |
|-----------|----------|----------|------------|
| Slip      | None     | None     | LYB Method |
| Antiblock | 4000 ppm | 4000 ppm | LYB Method |

| Product  | Product Density(g/cm <sup>3</sup> ) | Antiblock (ppm) |
|----------|-------------------------------------|-----------------|
| NA980000 | 0.920                               | None            |
| NA983085 | 0.922                               | 4000            |

## Notes

Data obtained from 1.25 mil (32 micron) film produced on a blown film line with a 8" (203 mm) die, 350°F (177°C) melt temperature, 2:1 BUR, 0.025" die gap at 150 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

© LyondellBasell Industries Holdings, B.V. 2018

## Disclaimer

Information in this document is accurate to the best of our knowledge at the date of publication. The document is designed to provide users general information for safe handling, use, processing, storage, transportation, disposal and release and does not constitute any warranty or quality specification, either express or implied, including any warranty of merchantability or fitness for any particular purpose. Users shall determine whether the product is suitable for their use and can be used safely and legally.

In addition to any prohibitions of use specifically noted in this document, LyondellBasell may further prohibit or restrict the sale of its products into certain applications. For further information, please contact a LyondellBasell representative.

## Trademarks

The Trademark referenced within the product name is owned or used by the LyondellBasell family of companies.