

MSDS for #7664, 7666, and 7668 Poly Bag Tubing

Petrothene®

NA 963

Low Density Polyethylene
Film Extrusion Grade
Melt Index 0.7 Density 0.919

Applications

PETROTHENE NA 963 is a series of resins formulated with special antiblock additive and designed for a wide variety of industrial film applications where high impact strength and excellent drawdown are needed. NA 963 exhibits uniformity, ease of processing and good tensile strength.

Regulatory Status

The basic resin NA 963 meets the requirements of the Food and Drug Administration, 21 CFR 177.1520. This regulation allows the use of this olefin polymer in "...articles or components of articles intended for use in contact with food." Specific limitations or conditions of use may apply. Contact your Equistar sales representative for further information regarding the suitability of specific products for specific applications.

Processing Techniques

Generally recommended extrusion conditions include a melt temperature range of 310°-350°F (155°-177°C) and a blow-up ratio range of 1.8-2.5:1. Drawdown to gauges below 1.0 mils (<25 microns) is possible at commercial rates when proper techniques are used. Specific recommendations for processing NA 963 can only be made when the processing conditions, equipment and end use are known. For further suggestions, please contact your Equistar sales representative.

Typical Properties*

| Property | Value | Units | ASTM Test Method |
|--|-----------------|----------|------------------|
| Melt Index | 0.7 | g/10 min | D 1238 |
| Density | 0.919 | g/cc | D 1505 |
| Vicat Softening Point | 90 | °C | D 1525 |
| Film | | | |
| Dart Drop Impact Strength, F ₅₀ | 130 | g | D 1709 |
| Tensile Strength, MD (TD) | 3,400 (2,400) | psi | D 882 |
| Elongation, MD (TD) | 160 (480) | % | D 882 |
| 1% Secant Modulus, MD (TD) | 26,000 (32,000) | psi | E 111 |
| Elmendorf Tear Strength, MD (TD) | 300 (180) | g | D 1922 |
| Molding | | | |
| Low Temperature Brittleness, F ₅₀ | -75 | °C | D 746 |
| Tensile Strength @ Yield (Break) | 1,550 (1,650) | psi | D 638 |
| Elongation @ Yield (Break) | 100 (700) | % | D 638 |
| Hardness, Shore D | 46 | | D 2240 |

| Product | NA 963-083 | NA 963-046 |
|-----------|------------|------------|
| Slip | None | High |
| Antiblock | Medium | None |

* These are typical values and not to be construed as specific product limits.

** Data obtained from film produced in a 31/2" (89 mm) blown film line, commercially available 8" (203 mm) die, 350°F (177°C) melt extrusion temperature, 2:1 BUR, 1.25 mil (32 micron) gauge, 0.025" die gap at 150 lb/hr

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