



DOW™ MDPE NG 7525

Medium Density Polyethylene Resin

Overview

MDPE NG 7525 is a Medium Density Polyethylene Resin produced in the UNIPOL™ Process. This resin is recommended to be used in thin-wall micro-irrigation tape application and profile extrusion application. Resin exhibits good draw down characteristics producing tapes with a reliable balance of extrusion and stiffness.

It can also be used as a component in mixtures with low density polyethylene resins and linear low density polyethylene resins, to modify and improve the mechanical properties. Outdoor applications require the addition of UV stabilizer to maintain the excellent properties over extended periods of UV exposure.

Main Characteristics:

- High performance in processability
- Excellent mechanical properties
- High ESCR
- Excellent seal property in drippers
- Complies with Regulation U.S. FDA 21 CFR 177.1520 (c) 3.2a
- Complies with EU, No 10/2011
- Consult the regulation for complete details

Additive

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

| Physical | Nominal Value (English) | Nominal Value (SI) | Test Method |
|--|-------------------------|-------------------------|-------------|
| Density | 0.939 g/cm ³ | 0.939 g/cm ³ | ASTM D792 |
| Base Density ¹ | 0.939 g/cm ³ | 0.939 g/cm ³ | Dow Method |
| Melt Index (190°C/21.6 kg) | 22 g/10 min | 22 g/10 min | ASTM D1238 |
| Environmental Stress-Cracking Resistance (ESCR) | | | ASTM D1693 |
| 122°F (50°C), 10% Igepal, F0 | > 2000 hr | > 2000 hr | |
| Mechanical | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Tensile Strength ² | | | ASTM D638 |
| Yield, Compression Molded | 2900 psi | 20.0 MPa | |
| Break, Compression Molded | 3770 psi | 26.0 MPa | |
| Tensile Elongation ² | | | ASTM D638 |
| Break, Compression Molded | > 700 % | > 700 % | |
| Flexural Modulus - 2% Secant ² (Compression Molded) | 72500 psi | 500 MPa | ASTM D790 |
| Thermal | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Vicat Softening Temperature | 250 °F | 121 °C | ASTM D1525 |
| Oxidation Induction Time (392°F (200°C)) | > 20 min | > 20 min | ASTM D3895 |

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

¹ Base density is estimated using the assumption that every 1000 ppm of antiblock in the finished product raises the density of the polymer by 0.0006 g/cm³. Base density is the estimated density of the polymer if it did not contain any antiblock.

² Plaques prepared according to standard ASTM D 1928 Procedure C.

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