



# DOW™ MDPE DPDA-3170 NT 7 Medium Density Polyethylene Resin

## Overview

DOW™ DPDA-3170 NT 7 Medium Density Polyethylene (MDPE) Resin is produced via UNIPOL™ Process Technology from Dow and is intended for rotational and injection molding and is specifically designed for applications requiring excellent processability and aesthetics combined with low warpage and good mechanical properties.

Processing and Stabilization: DOW DPDA-3170 NT 7 MDPE Resin is fully heat and UV stabilized resulting in a wide processing latitude, good color retention and long life expectancy.

- Rotational molding or injection molding
- For intermediate bulk containers, toys, general purpose custom molding, agricultural storage tanks, water tanks, marine parts, indoor consumer articles
- Excellent impact strength, stress crack resistance and processability
- Long term UV stabilization: UV-8 stabilizer package

Complies with:

- U.S. FDA 21 CFR 177.1520 (c)3.1a
- Canadian HPFB No Objection
- Underwriters Laboratories Inc.
- NSF International NSF/ANSI Std 61 (sec 4 & 5)
- European Commission Regulation (EU) No 10/2011

Consult the regulations for complete details.

## Additive

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

| Physical   | Nominal Value (English) | Nominal Value (SI)      | Test Method |
|--|-------------------------|-------------------------|-------------|
| Density  | 0.935 g/cm <sup>3</sup> | 0.935 g/cm <sup>3</sup> | ASTM D792   |
| Base Density <sup>1</sup>                                    | 0.935 g/cm <sup>3</sup> | 0.935 g/cm <sup>3</sup> | Dow Method  |
| Melt Index (190°C/2.16 kg)                                   | 7.0 g/10 min            | 7.0 g/10 min            | ASTM D1238  |
| Environmental Stress-Cracking Resistance (ESCR) <sup>2</sup> |                         |                         |             |
| 122°F (50°C), 10% Igepal, F50                                | > 417 hr                | > 417 hr                | ASTM D1693  |
| 122°F (50°C), 100% Igepal, F50                               | > 1000 hr               | > 1000 hr               | ASTM D1693A |
| Mechanical   | Nominal Value (English) | Nominal Value (SI)      | Test Method |
| Tensile Strength <sup>2</sup> (Yield)                        | 2670 psi                | 18.4 MPa                | ASTM D638   |
| Flexural Modulus - 1% Secant <sup>2</sup>                    | 87500 psi               | 603 MPa                 | ASTM D790B  |
| Impact   | Nominal Value (English) | Nominal Value (SI)      | Test Method |
| Impact Strength  |                         |                         | ARM         |
| -40°F (-40°C), 0.125 in (3.18 mm), Rotational Molded         | 53 ft·lb                | 72 J                    |             |
| -40°F (-40°C), 0.250 in (6.35 mm), Rotational Molded         | 168 ft·lb               | 228 J                   |             |
| Thermal  | Nominal Value (English) | Nominal Value (SI)      | Test Method |
| Deflection Temperature Under Load <sup>2</sup>               |                         |                         |             |
| 66 psi (0.45 MPa), Unannealed                                | 123 °F                  | 50.6 °C                 | ASTM D648   |
| 264 psi (1.8 MPa), Unannealed                                | 96.0 °F                 | 35.6 °C                 |             |
| Melting Temperature (DSC)                                    | 258 °F                  | 126 °C                  | Dow Method  |

