



# 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>			ASTM D648
66 psi (0.45 MPa), Unannealed	123 °F	50.6 °C	
264 psi (1.8 MPa), Unannealed	96.0 °F	35.6 °C	
Melting Temperature (DSC)	258 °F	126 °C	Dow Method

## Notes

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

<sup>1</sup> 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/cm<sup>3</sup>. Base density is the estimated density of the polymer if it did not contain any antiblock.

<sup>2</sup> Plaque molded and tested in accordance with ASTM D4976.

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Published: 2009-09-29

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