



Technical Data Sheet

RESILITY™ DPDB-3220 NT 7 High Density Polyethylene Resin

Overview

RESILITY™ DPDB-3220 NT 7 High Density Polyethylene Resin is produced via UNIPOL™ Process Technology from Dow and is intended for rotational and injection molding is specifically designed for applications requiring excellent processability and aesthetics combined with low warpage and good mechanical properties.

Processing and stabilization: RESILITY™ DPDB-3220 NT 7 High Density Polyethylene 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 large agricultural tanks, intermediate bulk containers, potable water, chemical tanks and industrial products
- Excellent impact strength, stress crack resistance and processability
- Long term UV stabilization: UV-20+ stabilizer package

Complies with:

- U.S. FDA 21 CFR 177.1520 (c)3.1a (with restrictions)
- European Commission Regulation (EU) No 10/2011
- REACH
- NSF51 and NSF 61
- UL94 HB, UL746C

Consult the regulations for complete details.

Additive

- Antiblock: no
- Slip: no
- Processing aid: no

Properties

| Physical | Nominal Value | Unit (English) | Nominal Value | Unit (SI) | Test Method ¹ |
|--|---------------|-------------------|---------------|-------------------|--------------------------|
| Density | 0.942 | g/cm ³ | 0.942 | g/cm ³ | ASTM D792 |
| Melt Mass-Flow Rate (190°C/2.16 kg) | 2.0 | g/10 min | 2.0 | g/10 min | ASTM D1238 |
| Environmental Stress-Cracking Resistance (ESCR) ² 122°F (50°C), 100% Igepal, F50 | > 500 | hr | > 500 | hr | ASTM D1693A |

1. ASTM: American Society for Testing and Materials
2. Plaque molded and tested in accordance with ASTM D4976.

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

Properties (Cont.)

| Mechanical | Nominal Value | Unit (English) | Nominal Value | Unit (SI) | Test Method |
|---|---------------|----------------|---------------|-----------|-------------|
| Tensile Strength (Yield) | 3500 | psi | 24.1 | MPa | ASTM D638 |
| Flexural Modulus - 1% Secant ² | 130000 | psi | 896 | MPa | ASTM D790B |
| Impact | | | | | |
| Impact Strength -40°F (-40°C), 0.250 in (6.35 mm), Rotational Molded | > 195 | ft•lb | > 264 | J | ARM |
| Thermal | | | | | |
| Deflection Temperature Under Load 266 psi (0.45 MPa), Unannealed | 136 | °F | 57.8 | °C | ASTM D648 |
| 264 psi (1.8 MPa), Unannealed | 104 | °F | 40.0 | | |
| Melting Temperature (DSC) | 262 | °F | 128 | °C | Dow Method |

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