

# HIVAL® 500354

High Density Polyethylene

Nexeo Solutions, LLC.

Message:

HIVAL® 500354 is a high density polyethylene material. This product is available in North America and is processed by blow molding or extrusion.

HIVAL® The main features of the 500354 are:

ROHS certification

BPA free

accessible food

Typical application areas include:

food contact applications

container

| General Information                            |                             |                   |             |
|------------------------------------------------|-----------------------------|-------------------|-------------|
| Features                                       | Compliance of Food Exposure |                   |             |
|                                                | BPA-free                    |                   |             |
| Uses                                           | Barrel                      |                   |             |
| Agency Ratings                                 | FDA 21 CFR 177.1520(c) 3.1  |                   |             |
|                                                | FDA 21 CFR 177.1520(c) 3.2  |                   |             |
| RoHS Compliance                                | RoHS compliance             |                   |             |
| Forms                                          | Particle                    |                   |             |
| Processing Method                              | Blow molding                |                   |             |
|                                                | Extrusion                   |                   |             |
| Physical                                       | Nominal Value               | Unit              | Test Method |
| Density                                        | 0.953                       | g/cm <sup>3</sup> | ASTM D1505  |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)      | 0.38                        | g/10 min          | ASTM D1238  |
| Environmental Stress-Cracking Resistance (F50) | 25.0                        | hr                | ASTM D1693  |
| Hardness                                       | Nominal Value               | Unit              | Test Method |
| Durometer Hardness (Shore D)                   | 66                          |                   | ASTM D2240  |
| Mechanical                                     | Nominal Value               | Unit              | Test Method |
| Tensile Strength (Yield)                       | 26.9                        | MPa               | ASTM D638   |
| Tensile Elongation (Break)                     | > 500                       | %                 | ASTM D638   |
| Flexural Modulus                               | 1240                        | MPa               | ASTM D790   |
| Impact                                         | Nominal Value               | Unit              | Test Method |
| Tensile Impact                                 | 64.1                        | J/cm              | ASTM D1822  |
| Blow Molding Barrel Temperature                | 166 - 182                   | °C                |             |
| Blow Molding Head Temperature                  | 191                         | °C                |             |
| Blow Molding Mold Temperature                  | 16                          | °C                |             |

| Thermal                                                                                                              | Nominal Value | Unit | Test Method |
|----------------------------------------------------------------------------------------------------------------------|---------------|------|-------------|
| Deflection Temperature Under Load (0.45 MPa, Unannealed)                                                             | 73.9          | °C   | ASTM D648   |
| Brittleness Temperature <sup>1</sup>                                                                                 | < -60.0       | °C   | ASTM D746   |
| Vicat Softening Temperature                                                                                          | 128           | °C   | ASTM D1525  |
| Extrusion                                                                                                            | Nominal Value | Unit |             |
| Drying Temperature                                                                                                   | 76.7 - 79.4   | °C   |             |
| Drying Time                                                                                                          | 2.0           | hr   |             |
| Cylinder Zone 1 Temp.                                                                                                | 193 - 227     | °C   |             |
| Cylinder Zone 3 Temp.                                                                                                | 199 - 232     | °C   |             |
| Cylinder Zone 5 Temp.                                                                                                | 204 - 243     | °C   |             |
| Die Temperature                                                                                                      | 210 - 232     | °C   |             |
| Extrusion instructions                                                                                               |               |      |             |
| Extrusion:<br>Screw L/D: 20:01<br>Compression Ratio: 2:1-3:1<br>Blow Moldig:<br>Blow Air: 90 psi<br>Pre Blow: 10 psi |               |      |             |
| NOTE                                                                                                                 |               |      |             |

1. F50

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