

# Exelene® HDPE 8000

High Density Polyethylene

Montachem International, Inc.

## Message:

Exelene HDPE 8000: Antioxidant

Exelene HDPE 8000UV: Antioxidant, UV Stabilizer

| General Information                                                               |                                      |                   |             |
|-----------------------------------------------------------------------------------|--------------------------------------|-------------------|-------------|
| Additive                                                                          | Antioxidant                          |                   |             |
|                                                                                   | UV Stabilizer                        |                   |             |
| Features                                                                          | Antioxidant                          |                   |             |
|                                                                                   | Food Contact Acceptable              |                   |             |
|                                                                                   | Good UV Resistance                   |                   |             |
|                                                                                   | Homopolymer                          |                   |             |
|                                                                                   | Narrow Molecular Weight Distribution |                   |             |
| Uses                                                                              | Containers                           |                   |             |
|                                                                                   | Food Containers                      |                   |             |
| Agency Ratings                                                                    | FDA 21 CFR 177.1520(c) 2.1           |                   |             |
| Processing Method                                                                 | Injection Molding                    |                   |             |
| Physical                                                                          | Nominal Value                        | Unit              | Test Method |
| Specific Gravity                                                                  | 0.961                                | g/cm <sup>3</sup> | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)                                         | 8.5                                  | g/10 min          | ASTM D1238  |
| Environmental Stress-Cracking Resistance (50°C, 1.90 mm, 100% Igepal CO-630, F50) | 3.00                                 | hr                | ASTM D1693B |
| Hardness                                                                          | Nominal Value                        | Unit              | Test Method |
| Durometer Hardness (Shore D, 1 sec, 23°C)                                         | 70                                   |                   | ASTM D2240  |
| Mechanical                                                                        | Nominal Value                        | Unit              | Test Method |
| Tensile Strength <sup>1</sup> (Yield)                                             | 31.0                                 | MPa               | ASTM D638   |
| Tensile Elongation <sup>2</sup> (Break)                                           | > 600                                | %                 | ASTM D638   |
| Flexural Modulus <sup>3</sup> (3.20 mm)                                           | 1210                                 | MPa               | ASTM D790B  |
| Impact                                                                            | Nominal Value                        | Unit              | Test Method |
| Notched Izod Impact (3.20 mm)                                                     | 53                                   | J/m               | ASTM D256A  |
| Tensile Impact Strength                                                           | 168                                  | kJ/m <sup>2</sup> | ASTM D1822  |
| Thermal                                                                           | Nominal Value                        | Unit              | Test Method |
| Deflection Temperature Under Load (0.45 MPa, Unannealed)                          | 87.0                                 | °C                | ASTM D648   |
| Brittleness Temperature <sup>4</sup>                                              | < -75.0                              | °C                | ASTM D746A  |

|                             |     |    |                         |
|-----------------------------|-----|----|-------------------------|
| Vicat Softening Temperature | 128 | °C | ASTM D1525 <sup>5</sup> |
| Melting Temperature         | 133 | °C | DSC                     |

| NOTE |                                   |  |  |
|------|-----------------------------------|--|--|
| 1.   | Type IV, 50 mm/min                |  |  |
| 2.   | Type IV, 50 mm/min                |  |  |
| 3.   | Type I, 13 mm/min                 |  |  |
| 4.   | F50; 25 lbf-in                    |  |  |
| 5.   | Rate A (50°C/h), Loading 1 (10 N) |  |  |

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