

# Tenite™ Propionate 360E4861316 Clear, Trsp

Cellulose Acetate Propionate

Eastman Chemical Company

## Message:

Tenite™ cellulosic plastics are noted for their excellent balance of properties - toughness, hardness, strength, surface gloss, clarity, and a warm feel. The mechanical properties of Tenite™ cellulosic plastics differ with plasticizer levels. Lower plasticizer content yields a harder surface, higher heat resistance, greater rigidity, higher tensile strength, and better dimensional stability. Higher plasticizer content increases impact strength. Tenite™ cellulosic plastics are available in natural, clear, selected ambers or smoke transparents and black translucent. Color concentrates are available in let-down ratios from 10:1 to 40:1.

| General Information               |                                      |                   |             |
|-----------------------------------|--------------------------------------|-------------------|-------------|
| Additive                          | Plasticizer (16%)                    |                   |             |
| Features                          | Food Contact Acceptable              |                   |             |
|                                   | Good Strength                        |                   |             |
|                                   | Good Toughness                       |                   |             |
|                                   | High Clarity                         |                   |             |
|                                   | High Gloss                           |                   |             |
|                                   | High Hardness                        |                   |             |
|                                   | Plasticized                          |                   |             |
|                                   | Renewable Resource Content           |                   |             |
| Uses                              | Soft                                 |                   |             |
|                                   | Profiles                             |                   |             |
|                                   | FDA Food Contact, Unspecified Rating |                   |             |
|                                   | Amber                                |                   |             |
|                                   | Black                                |                   |             |
| Agency Ratings                    | Clear/Transparent                    |                   |             |
|                                   | Natural Color                        |                   |             |
|                                   | Pellets                              |                   |             |
|                                   | Forms                                |                   |             |
| Physical                          | Nominal Value                        | Unit              | Test Method |
| Specific Gravity                  | 1.19                                 | g/cm <sup>3</sup> | ASTM D792   |
| Molding Shrinkage - Flow          | 0.20 to 0.60                         | %                 | ASTM D955   |
| Water Absorption (23°C, 24 hr)    | 1.4                                  | %                 | ASTM D570   |
| Hardness                          | Nominal Value                        | Unit              | Test Method |
| Rockwell Hardness (R-Scale, 23°C) | 68                                   |                   | ASTM D785   |
| Mechanical                        | Nominal Value                        | Unit              | Test Method |
| Tensile Strength                  |                                      |                   | ASTM D638   |
| Yield, 23°C                       | 26.9                                 | MPa               |             |
| Break, 23°C                       | 30.3                                 | MPa               |             |
| Tensile Elongation (Break, 23°C)  | 45                                   | %                 | ASTM D638   |

|  |                    |          |             |
|--|--------------------|----------|-------------|
| Flexural Modulus (23°C)                        | 1240               | MPa      | ASTM D790   |
| Flexural Strength (Yield, 23°C)                | 35.2               | MPa      | ASTM D790   |
| Impact   | Nominal Value      | Unit     | Test Method |
| Notched Izod Impact                            |                    |          | ASTM D256   |
| -40°C  | 120                | J/m      |             |
| 23°C   | > 530              | J/m      |             |
| Thermal  | Nominal Value      | Unit     | Test Method |
| Deflection Temperature Under Load <sup>1</sup> |                    |          | ASTM D648   |
| 0.45 MPa, Annealed                             | 80.0               | °C       |             |
| 1.8 MPa, Annealed                              | 72.0               | °C       |             |
| Vicat Softening Temperature <sup>2</sup>       | 92.0               | °C       | ASTM D1525  |
| CLTE - Flow (23°C)                             | 1.1E-4 to 1.6E-4   | cm/cm/°C | ASTM D696   |
| Specific Heat (23°C)                           | 1260 to 1670       | J/kg/°C  | DSC         |
| Thermal Conductivity <sup>3</sup> (23°C)       | 0.25               | W/m/K    | ASTM C177   |
| Electrical                                     | Nominal Value      | Unit     | Test Method |
| Volume Resistivity (23°C)                      | 1.0E+13 to 1.0E+15 | ohms·cm  | ASTM D257   |
| Dielectric Strength (23°C)                     | 12 to 19           | kV/mm    | ASTM D149   |
| Dielectric Constant (23°C, 1 MHz)              | 3.30 to 3.80       |          | ASTM D150   |
| Dissipation Factor (23°C, 1 MHz)               | 0.010 to 0.15      |          | ASTM D150   |
| Optical  | Nominal Value      | Unit     | Test Method |
| Refractive Index                               | 1.460 to 1.490     |          | ASTM D542   |
| Transmittance (1520 μm)                        | > 90.0             | %        | ASTM D1003  |
| Haze (1520 μm)                                 | < 8.5              | %        | ASTM D1003  |
| Additional Information                         | Nominal Value      | Unit     | Test Method |
| Soluble Matter Loss (23°C)                     | 0.10               | %        | ASTM D570   |
| Weight Loss on Heating - 72 hrs (80°C)         | 0.90               | %        | ASTM D1562  |
| NOTE   |                    |          |             |

1. Conditioned 4 hours at 70°C (158°F)

2. Conditioned 4 hours at 70°C (158°F)

3. Range: 0.17 to 0.33

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