

# Plenco 01586 (Transfer)

Thermoset Polyester

Plastics Engineering Co.

## Message:

PLENCO 01586 is a glass and mineral reinforced pelletized polyester molding compound offering excellent heat resistance and mechanical strength properties. This product is typically used for injection molded electrical appliance components. UL recognized under component file E40654. 01586 is available in white, yellow, or grey colors.

| General Information            |   |                   |             |
|--------------------------------|---|-------------------|-------------|
| UL YellowCard                  | E40654-231664   |                   |             |
| Filler / Reinforcement         | Glass fiber reinforced material<br>Mineral filler               |                   |             |
| Features                       | Good strength<br>Heat resistance, high                          |                   |             |
| Uses                           | Electrical/Electronic Applications<br>Home appliance components |                   |             |
| UL File Number                 | E40654  |                   |             |
| Appearance                     | White   |                   |             |
| Forms                          | Particle  |                   |             |
| Processing Method              | Resin transfer molding  |                   |             |
| Physical                       | Nominal Value   | Unit              | Test Method |
| Specific Gravity               | 1.92  | g/cm <sup>3</sup> | ASTM D792   |
| Apparent Density               | 0.95  | g/cm <sup>3</sup> | ASTM D1895  |
| Molding Shrinkage - Flow       | 0.19  | %                 | ASTM D955   |
| Water Absorption (24 hr)       | 0.070   | %                 | ASTM D570   |
| Hardness                       | Nominal Value   | Unit              | Test Method |
| Rockwell Hardness (E-Scale)    | 51  |                   | ASTM D785   |
| Mechanical                     | Nominal Value   | Unit              | Test Method |
| Tensile Modulus                | 10800   | MPa               | ASTM D638   |
| Tensile Strength               | 76.0  | MPa               | ASTM D638   |
| Tensile Elongation (Break)     | 1.3   | %                 | ASTM D638   |
| Flexural Modulus               | 10200   | MPa               | ASTM D790   |
| Flexural Strength              | 119   | MPa               | ASTM D790   |
| Compressive Strength           | 157   | MPa               | ASTM D695   |
| Impact                         | Nominal Value   | Unit              | Test Method |
| Charpy Notched Impact Strength | 72.4  | J/m               | ASTM D256   |
| Notched Izod Impact            | 77  | J/m               | ASTM D256   |
| Thermal                        | Nominal Value   | Unit              | Test Method |

|   |                      |             |                    |
|---|----------------------|-------------|--------------------|
| Deflection Temperature Under Load (1.8 MPa, Unannealed) | 267                  | °C          | ASTM D648          |
| Continuous Use Temperature                              | 211                  | °C          | ASTM D794          |
| <b>Electrical</b>                                       | <b>Nominal Value</b> | <b>Unit</b> | <b>Test Method</b> |
| Volume Resistivity                                      | 1.2E+15              | ohms·cm     | ASTM D257          |
| Dielectric Strength                                     |                      |             | ASTM D149          |
| -- <sup>1</sup>   | 12                   | kV/mm       | ASTM D149          |
| -- <sup>2</sup>   | 11                   | kV/mm       | ASTM D149          |
| Dielectric Constant (1 MHz)                             | 4.20                 |             | ASTM D150          |
| Dissipation Factor (1 MHz)                              | 0.013                |             | ASTM D150          |
| Arc Resistance  | 187                  | sec         | ASTM D495          |
| Comparative Tracking Index (CTI)                        | 600                  | V           | UL 746             |
| <b>Flammability</b>                                     | <b>Nominal Value</b> | <b>Unit</b> | <b>Test Method</b> |
| Flame Rating (1.00 mm)                                  | V-0                  |             | UL 94              |
| Oxygen Index  | 36                   | %           | ASTM D2863         |

#### Additional Information

The value listed as Mold Shrink, Linear-Flow, ASTM D955 was tested according to the ASTM D6289 standard. The value listed as Comparative Tracking Index, UL 746 was tested according to ASTM D3638. Post Shrinkage, ASTM D6289, 72hr, 120°C: 0.01% Heat Resistance, ASTM D794: 211°C

|                  |                      |             |
|------------------|----------------------|-------------|
| <b>Injection</b> | <b>Nominal Value</b> | <b>Unit</b> |
| Mold Temperature | 163 - 182            | °C          |
| Back Pressure    | 0.300                | MPa         |
| Screw Speed      | < 60                 | rpm         |

#### Injection instructions

Transfer Time: 3-8 sec Transfer Pressure: 5.5-6.9 MPa Preheating Temperature: 93-100°C

#### NOTE

1. Method A (short time)
2. Method B (step by step)

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