

# MATERIALS ENGINEERING LABORATORY DATA REPORT **PLENCO 02311** Two-Stage Phenolic transfer molded

PLENCO 02311 is a versatile general purpose organic filled phenolic molding compound offering excellent mold processability and optimized cure cycles. PLENCO 02311 is also granulated to provide improved pourability characteristics for cold powder compression molding. UL recognized under component file E40654. 02311 is available in black or brown color.

| <b>PROPERTY</b>                | <b>metric</b>          | <b>english</b>          | <b>ASTM<br/>Test<br/>Method</b> |
|--------------------------------|------------------------|-------------------------|---------------------------------|
| Form                           | granular               |                         |                                 |
| Apparent Density               | 0.62 g/cm <sup>3</sup> | 38.4 lb/ft <sup>3</sup> | D1895                           |
| Specific Gravity               | 1.42                   |                         | D792                            |
| Mold Shrinkage                 | 0.0074 m/m             | 0.0074 in/in            | D6289                           |
| Post Shrinkage 72hr 120°C      | 0.31 %                 |                         | D6289                           |
| Izod Impact Notched            | 17.6 J/m               | 0.33 ft-lb/in           | D256                            |
| Charpy Impact Notched          | 19.6 J/m               | 0.37 ft-lb/in           | D256                            |
| Drop Ball Impact               | 99 J/m                 | 1.9 ft-lb/in            | Plenco                          |
| Tensile Strength               | 51 MPa                 | 7,377 psi               | D638                            |
| Tensile Modulus                | 8,347 MPa              | 1,211,000 psi           | D638                            |
| Tensile Elongation             | 0.7 %                  |                         | D638                            |
| Flexural Strength              | 72.7 MPa               | 10,551 psi              | D790                            |
| Flexural Modulus               | 7,512 MPa              | 1,090,000 psi           | D790                            |
| Compressive Strength           | 203 MPa                | 29,415 psi              | D695                            |
| Heat Resistance                | 199 °C                 | 391 °F                  | D794                            |
| Deflection Temperature 1.82MPa | 168 °C                 | 334 °F                  | D648                            |
| Water Absorption               | 0.35 %                 |                         | D570                            |
| Rockwell Hardness              | 85 E scale             |                         | D785                            |
| Dielectric Strength short time | 10.0 kV/mm             | 255 V/mil               | D149                            |
| Dielectric Strength Step       | kV/mm                  | V/mil                   | D149                            |
| Dissipation Factor, 1MHz       | 0.060                  |                         | D150                            |
| Permittivity, 1MHz             | 5.5                    |                         | D150                            |
| Volume Resistivity             | 6.0E+11 ohm-cm         | 2.4E+11 ohm-in          | D257                            |
| ASTM Arc Resistance            | 142 sec                |                         | D495                            |
| Comparative Tracking Index     | 150 V                  |                         | D3638                           |
| UL Flammability                | HB @1.50mm             |                         | UL 94                           |
| Oxygen Index                   | 26.6 %                 |                         | D2863                           |
| Thermal Expansion              | 6.4E-05 /°C            | 3.6E-05 /°F             | E831                            |
| Thermal Conductivity 100°C     | W/m/°C                 | Btu/hr/ft/°F            | E1461                           |

Store in cool dry place.

*The Typical Values listed are results obtained from the testing of standard specimens using the stated test procedures, with said specimens molded under controlled laboratory conditions from representative samplings of the product. Although Plastics Engineering Company at all times reserves the right to make changes in the materials, suppliers and processing, the values listed as typical are those to be expected at the time of our manufacture. The final determination of the accuracy or completeness of any information, the suitability of the product for the use contemplated, the manner of its use, and the matter of any infringement of patents in use, are all the sole responsibility of the user. PLASTICS ENGINEERING COMPANY MAKES NO WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO THIS PRODUCT, INCLUDING NO WARRANTY OF THE MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE. Plastics Engineering Company reserves at all times the right to discontinue the production of any or all of its products. This is an uncontrolled copy and not subject to updates.*