

# MATERIALS ENGINEERING LABORATORY DATA REPORT

## PLENCO 06310

### Two-Stage Phenolic compression molded

PLENCO 06310 is a glass and mineral filled phenolic molding compound offering excellent heat resistance and dimensional stability. 06310 is available in black.

| PROPERTY                         | metric                 | english                 | ASTM<br>Test<br>Method |
|----------------------------------|------------------------|-------------------------|------------------------|
| Form                             | Granular               |                         |                        |
| Apparent Density                 | 0.96 g/cm <sup>3</sup> | 59.7 lb/ft <sup>3</sup> | D1895                  |
| Specific Gravity                 | 1.86                   |                         | D792                   |
| Mold Shrinkage*                  | 0.0026 m/m             | 0.0026 in/in            | D6289                  |
| Post Shrinkage 72hr 120°C        | 0.12 %                 |                         | D6289                  |
| Izod Impact Notched              | 19.3 J/m               | 0.36 ft·lb/in           | D256                   |
| Charpy Impact Notched            | 21.2 J/m               | 0.40 ft·lb/in           | D256                   |
| Drop Ball Impact                 | 87 J/m                 | 1.6 ft·lb/in            | Plenco                 |
| Tensile Strength                 | 36 MPa                 | 5,170 psi               | D638                   |
| Tensile Modulus                  | 14,901 MPa             | 2,161,000 psi           | D638                   |
| Tensile Elongation               | 0.3 %                  |                         | D638                   |
| Flexural Strength                | 68.2 MPa               | 9,888 psi               | D790                   |
| Flexural Modulus                 | 13,176 MPa             | 1,911,000 psi           | D790                   |
| Compressive Strength             | 178 MPa                | 25,870 psi              | D695                   |
| Heat Resistance                  | 216 °C                 | 421 °F                  | D794                   |
| Deflection Temperature 1.82MPa   | 191 °C                 | 377 °F                  | D648                   |
| Water Absorption                 | 0.08 %                 |                         | D570                   |
| Rockwell Hardness                | 80 E scale             |                         | D785                   |
| Dielectric Strength short time   | 12.3 kV/mm             | 313 V/mil               | D149                   |
| Dissipation Factor, 1MHz         | 0.017                  |                         | D150                   |
| Permittivity, 1MHz               | 5.2                    |                         | D150                   |
| Volume Resistivity               | 9.6E+12 ohm·cm         | 3.8E+12 ohm·in          | D257                   |
| ASTM Arc Resistance              | 98 sec                 |                         | D495                   |
| Comparative Tracking Index       | 182 V                  |                         | D3638                  |
| UL Flammability                  |                        |                         | UL 94                  |
| Oxygen Index                     | %                      |                         | D2863                  |
| Coefficient of Thermal Expansion | 3.2E-05 /°C            | 1.8E-05 /°F             | E831                   |
| Thermal Conductivity 100°C       | W/m/°C                 | Btu/hr/ft/°F            | E1461                  |

Prior to molding compression electrical specimens, material is dried 30 min @ 90C, 110C preheat.

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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.*

*\*Mold Shrinkage obtained under controlled laboratory conditions with relatively simple mold geometry and should be used for comparison purposes only and not for actual tool design.*