

02000

Series

General Purpose Phenolic Materials

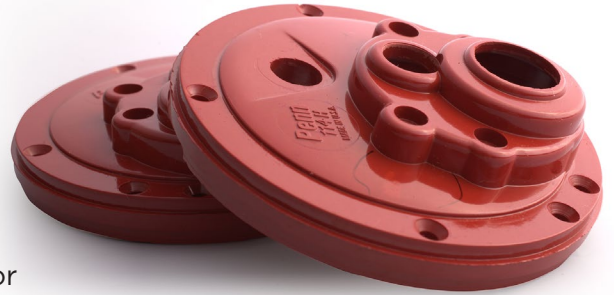
General Purpose Phenolic Materials



Plenco's 02000 series

02000 products are organic-filled phenolic molding materials. They offer an outstanding combination of mechanical strength and electrical insulation at a low cost per cubic inch.

Formulations are available with single-stage and two-stage phenolic resins and multiple flow grades for optimized injection, transfer and compression molding. Color options for some formulas include black, brown, red and green.



Applications

Plenco 02000 materials are typically specified for light to medium duty applications where higher flammability ratings are not required and cost is a significant concern. Two-stage resins are most often chosen for their long shelf life and easy processing. Single stage resins are selected when ammonia outgassing may interact with precious metal contacts, and for wet/dry applications.

These materials offer a glossy, scratch and chemical resistant surface suitable for cosmetic and industrial uses. Plenco customers have successfully used our 02000 materials to produce, cookware knobs and handles, small appliance components, cosmetic and chemical container closures, electrical switch handles and housings, fuseholders, idler pulleys, and oil field development, completion and production devices.



Typical Data Sheet Property Ranges* - Plenco 02000 series

PROPERTY	ENGLISH	ASTM METHOD
Form	Granular	
Apparent Density (lb/ft ³)	36.0 - 45.3	D1895
Specific Gravity	1.37 - 1.43	D792
Mold Shrinkage	0.0033 - 0.011**	D955
Post Shrink	0.16% - 0.56%	D1299
Izod Impact-notched (ft*lb/in)	0.28 - 0.34	D256
Charpy Impact - notched (ft*lb/in)	0.34 - 0.38	D256
Tensile Strength (psi)	7,100 - 9,100	D638
Tensile Modulus (msi)	1.0 - 1.4	D638
Tensile Elongation (%)	0.48 - 1.08	D638
Flexural Strength (psi)	10,200 - 14,100	D790
Flexural Modulus (msi)	1.0 - 1.3	D790
Compressive Strength (psi)	26,700 - 33,200	D695
Rockwell Hardness (E scale)	67 - 94	D785
Heat Resistance (°F)	363 - 410	D794
Heat Deflection - 1.82MPa (°F)	285 - 370	D648
Water Absorption (%)	0.26 - 0.64	D570
Dielectric Strength - ST (V/mil)	210 - 396	D149
Comparative Tracking Index (V)	150 - 175	D3638
ASTM Arc Resistance (sec)	80 - 150	D495
UL Flammability (@1.47mm)	HB - V-1	UL94
CTE by TMA - 40°C to 130°C (°F)	4.3 E-05 - 7.4 E-05	
Thermal Conductivity @ 212°F	0.20 - 0.22 (Btu/hr/ft/°F)	
Poisson's Ratio in Tension	0.34 - 0.36	



*Please consult your Plenco Technical Sales Representative for specific material details.
Fitness for use must be determined by the end user.*

* Properties listed above are the range of properties available from Plenco material data sheets. The range was taken from injection, compression and transfer molded sample data as available on www.plenco.com.

**Mold shrinkage values are generated under controlled laboratory conditions. Values provided above are for reference only and should not be used to build molds.