

# (CMS53)

**CMS53** is a lubricated (polyetheretherketone) material. This material is designed for rider bands and piston rings in reciprocating compressors.

<b>Physical Properties</b>	<b>ASTM Method</b>	<b>Typical Values</b>
Specific Gravity	D792	1.41 gr/cm <sup>3</sup>
Water Absorption (24hrs. @73.4°F)	D570	0.15 %
Color	N/A	Black

## **Mechanical Properties**

Tensile Strength	D638	11000 psi
Tensile Elongation	D638	3.6 %
Flexural Strength	D790	21,000 psi
Flexural Modulus	D790	800,000 psi
Compressive Strength (5% strain)	D695	18,100 psi
Compressive Modulus	D695	381,000 psi
Impact Strength (Izod, notched)	D256	0.8 ft-lb/in
Hardness	Shore D	86

## **Tribological Properties**

Coefficient of Friction -Static	D3702	0.35
Dynamic	D3702	0.29
Wear Rate (PV: 20,000 psi-fpm)	D3702	5.5 µin/min

## **Thermal Properties**

Coefficient of Linear Thermal Expansion (78 to 400°F)	D696	17 10 <sup>-6</sup> /°F
Heat Deflection Temperature (@264 psi)	D648	530 °F
Glass Transition Temperature (T <sub>g</sub> )	D3418	289 °F
Continuous Service Temperature (Max @ no load)		480 °F
Melting Point		644 °F

## **Electrical Properties**

Volume Resistivity	D257	10 <sup>10</sup> ohm-cm
Dielectric Strength	D149	KV/mm
Dielectric Constant	D150	Hz, 200° C