

CPI 192

Special polymer alloy for high duty
gas compressor piston and rod seals



materials data

CPI 192 is a proprietary polymer alloy developed exclusively by CPI, which has become widely specified for extreme service in both lubricated and oil-free gas compressors.

The unique self lubricating properties of CPI 192 material have allowed its successful application as piston and rod seals in high pressure oil-free compressors, including those handling “bone-dry” gases. (For example: rod packings in oil-free conditions up to 350 bar.)

In oil-lubricated compressor applications the mechanical properties of CPI 192 have enabled its use in high pressure conditions which traditionally required metallic (eg: bronze) components to be used, or where filled-PTFE components have exhibited extrusion or high wear rates. (For example: ethylene primary compression to 400 bar.)

CPI should be consulted for the proper design and application of its specialized products and materials. For further advice and technical support please contact CPI directly.

Typical properties	Metric	Imperial
Tensile strength at 20°C	35 MPa	5000 psi
Elongation at 20°C (%)	1-2	1-2
Coefficient of thermal expansion	40 x 10 ⁻⁶ /°C	2.2 x 10 ⁻⁵ /°F
Hardness (Shore 'D')	80-85	80-85
Specific gravity	1.5	1.5
Suggested mean temperature limit (Ts +Td)/2 (non-lube gas compressors)	175 °C	350 °F
Suggested mean temperature limit (Ts +Td)/2 (lubricated gas compressors)	200 °C	390 °F