

CPI 188

Dry nitrogen compressor piston ring and packing material



CPI 188 is a specially developed polymer alloy for use in oil-free dry nitrogen compressors, or in other inert gases such as helium or argon.

The special formulation and unique processing of this material provides exceptional wear resistance in this demanding application, in which the majority of self-lubricating materials, such as filled PTFEs give unacceptably short lives.

CPI 188 may be selected for low to medium pressure nitrogen compressors. For high pressure nitrogen compressors and for most packing duties, the special grades CPI 196 or CPI 197 may be used.

CPI 188 should not be selected for crude nitrogen or argon compressors, in which a small percentage of oxygen is present. Other CPI grades are available for this service.

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	9 MPa	1300 psi
Elongation at 20°C (%)	2-4	2-4
Coefficient of thermal expansion	70-90 x 10 ⁻⁶ /°C	3.9-5.0 x 10 ⁻⁵ /°F
Hardness (Shore 'D')	65-70	65-70
Specific gravity	2.0	2.0
Suggested mean temperature limit (Ts +Td)/2 (non-lube gas compressors)	120 °C	250 °F

Note: The values above are for reference only and are not intended for specification or quality control purposes.