

HY534

Piston rod packing

HY534 is a premium PEEK based material especially suitable for high pressure and high temperature lubricated applications. The material has high resistance to a wide variety of chemicals, and has been applied successfully in gases such as hydrogen, ammonia, synthesis gas, carbon dioxide and ethylene showing outstanding results. This grade continues to enjoy worldwide success in reciprocating compressors.

Physical Properties

| Property | Method | Value |
|---|------------|-----------|
| COTE - Radial x 10 ⁻⁶ /C (20-200 °C) | ASTM D696 | 31 |
| COTE - Axial x 10 ⁻⁶ /C (20-200 °C) | ASTM D696 | 32 |
| Density (g/cm ³) ASTM D792 | 1.45 | - |
| Shore D Hardness ASTM D2240 | 83 | ASTM D792 |
| Tensile strength at break (MPa) | ASTM D2240 | 83 |
| Elongation at break (%) | ASTM D638 | 55 |
| Elongation at break (%) | ASTM D638 | 3.3 |

Air

Industrial Gases

Natural Gas

Refinery

Olefins

Alcohols

Chemicals

Refrigeration

Operating range

| Max. Gas Temperature (°C) | | Max. Pressure (bar) | | | |
|---------------------------|--------|---------------------|------|---------------------|------|
| Discharge | Design | Packing Discharge | | Cylinder Ring Diff. | |
| | | Non-Lube | Lube | Non-Lube | Lube |
| 275 | 195 | 300(#) | 450 | # | 250 |

Operating restriction for oxygen-service: Compression ratio up to 3 and max. temperature 225°C

All values are approximate and subject to change without notification.

The maximum material design temperature is calculated by considering suction and discharge conditions, machine speed, cooling and loading. Typically: $T_{design} = T_{suction} + 2/3(T_{discharge} - T_{suction})$. Additional operating conditions need to be considered when making material selections. The data presented are guidelines only; consult HOERBIGER to ensure the correct material is specified.

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