

# HY538

This specially formulated low creep PTFE compound is intended primarily for gas compressor rod packings, piston rings and rider bands in non-lube conditions where the gas is dry or bone dry with a dew point of -60°C or lower. This material should be used in those situations where the differential gas pressure is less than 50 bar. At differential pressures greater than 50 bar where higher creep resistance is required, HY101 should be used.

## Physical Properties

| Property  | Method         | Value      |
|---|----------------|------------|
| COTE - Radial x 10 <sup>-6</sup> /C (20-200 °C) | ASTM D696      | 70         |
| COTE - Axial x 10 <sup>-6</sup> /C (20-200 °C)  | ASTM D696      | 120        |
| Density (g/cm <sup>3</sup> )                    | ASTM D792 -00  | 1.78± 0.05 |
| Shore D Hardness                                | ASTM D2240 -04 | 64 ± 2     |
| Tensile strength at break (MPa)                 | ASTM D638 -03  | 9.1 ± 1.0  |
| Elongation at break (%)                         | ASTM D638 -03  | 75.0 ±4.3  |

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 |
| 200                       | 150    | 150                 | -    | 50                  | -    |

Operating restriction for oxygen-service: Compression ratio up to 3

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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