

# HY54

The properties of HY54 provide a very versatile material grade that has been successfully applied in a multitude of applications, with gas conditions from wet through to dry, in both lubricated and non-lubricated service. This material has shown itself to be a broad range problem solving material where standard carbon filled PTFE materials do not give desired lifetime. Successful experience in compressor applications covers air, methane, ethylene, propylene, helium, hydrogen, and nitrogen and other mixed gas process streams.

## Physical Properties

Property	Method	Value
COTE - Radial x 10 <sup>-6</sup> /C (20-200 °C)	ASTM D696	79.9
COTE - Axial x 10 <sup>-6</sup> /C (20-200 °C)	ASTM D696	141.0
Density (g/cm <sup>3</sup> )	ASTM D792 -00	2.11
Shore D Hardness	ASTM D2240 -04	62.5
Tensile strength at break (MPa)	ASTM D638 -03	19
Elongation at break (%)	ASTM D638 -03	80

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	100	175	50	100

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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