HY103

PEEK based material that excels in high temperature applications

HY103 is a premium PEEK based material with application in both non-lubricated and lubricated compressor service where high operating temperatures exist. 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 proprietary blend excels in temperatures up to 250°C and pressures up to 510 bar while exhibiting no measurable creep. 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	37.5
COTE - Axial x 10-6/C (20-200 °C)	ASTM D696	38.8
Density (g/cm3)	ASTM D792	1.53
Shore D Hardness	ASTM D2240	81
Tensile strength at break (MPa)	ASTM D638	62
Elongation at break (%)	ASTM D638	2.5

Operating range

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

- **Air**
- **Industrial Gases**
- **Natural Gas**
- **Refinery**
- **Olefins**
- **Alcohols**
- **Chemicals**
- **Refrigeration**

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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: Tdesign = Tsuction + 2/3(Tdischarge – Tsuction). 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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