



TruTech® P2210 Material

TruTech P2210 is a special polymer alloy created for rod packing, piston rings and riders used in non-lubricated and/or high-temperature applications. It is uniquely suited for the demands of injection-stretch blow molding processes used to produce PET (polyethylene terephthalate). It also provides outstanding performance in a variety of other applications, both lubricated and non-lubricated.

EXCEPTIONAL WEAR RESISTANCE

TruTech P2210 is a blend of proprietary fillers in a matrix of PTFE (polytetrafluoroethylene). It was developed for non-lubricated applications up to 1,000 psi (70 bar) and lubricated applications up to 2,500 psi (175 bar). TruTech P2210 has demonstrated exceptional wear behavior with air, methane, propane, LNG and bone-dry gases.

TruTech P2210 is suitable for a wide range of rod packing rings, piston rings and rider rings. It exhibits excellent mechanical properties and readily accommodates special features. As with all Cook Compression® products, the performance of TruTech P2210 is backed by extensive engineering research and analysis.

TRUTECH MATERIALS

Incorporating the latest advances in polymer science, TruTech™ materials from Cook Compression offer superior durability and optimum performance characteristics for reciprocating compressor components. Experienced Cook Compression specialists provide engineering support to ensure optimal results in each application.



TruTech P2210 is ideal for components used in PET blow molding processes

ADVANTAGES

- Outstanding durability in oil-free applications
- Excellent service in bone-dry (very low dew point) environments
- More tolerant of dirty gas streams
- Suitable for use in many lubricated and non-lubricated applications
- Rigorously tested and field-proven
- Support from Cook Compression engineers to ensure proper material selection and application



MATERIALS DEVELOPMENT

The Cook Compression Materials Technology program integrates the latest advances in materials with extensive engineering resources and more than a century of practical experience. New materials receive intensive laboratory analysis and undergo comprehensive testing before release to the field.

A comprehensive quality control program ensures that materials and finished components meet the highest standards.



TYPICAL PROPERTIES		
Tensile strength	1800 psi (12.4 MPa)	ASTM D638
Elongation	130%	ASTM D638
Coefficient of thermal expansion (CTE)	$68 \times 10^{-6}/^{\circ}\text{F}$ ($122 \times 10^{-6}/^{\circ}\text{C}$)	ASTM E831
Hardness	65 Shore D	ASTM D2240
Specific gravity	3.9	ASTM D792

APPLICATION HISTORIES					
Service	Lube (Yes/No)	Product Type	Discharge	Avg. Speed	Performance Comments
Propane	N	Piston rings	350 psi 25 bar	900 ft/min 4.6 m/s	10x improvement over filled PTFE
Methane	Y	Rider rings	400 psi 28 bar	1,000 ft/min 5.1 m/s	15x improvement over OEM
Air	N	Piston rings	680 psi 47 bar	700 ft/min 3.6 m/s	2x improvement over OEM
Propane	N	Rod rings	350 psi 25 bar	900 ft/min 4.6 m/s	10x improvement over filled PTFE
Methane	Y	Rider rings	1,200 psi 83 bar	1,000 ft/min 5.1 m/s	15x improvement over OEM
Air	N	Piston rings	575 psi 40 bar	700 ft/min 3.6 m/s	2x improvement over OEM