

# CPI PUMPGUARD™ 182

Special polymer alloy for pump bushes



**CPI PUMPGUARD™ 182 material is a proprietary polymer alloy for pump bushings designed to be used for wear rings, guide bushings and thrust washers. This material is intended to replace commonly used metallic materials in pump applications.**

PUMPGUARD material allows a reduction in running clearance of 50% on wearing elements without the risk of damage to metal components. The properties of this material help to avoid catastrophic pump failures caused by dry-run start up or excessive vibration. PUMPGUARD meets the requirements of API610-11<sup>th</sup> edition for the application of non-metallic wear parts used in centrifugal pumps for petroleum, petrochemical and natural gas industries.

CPI PUMPGUARD provides advantages for pump applications such as higher resistance in occasional dry runs, low coefficient of thermal expansion and excellent resistance to chemical attack as well as impacts, thermal shocks, and hydrolysis.

Other PUMPGUARD material advantages:

- Good machinability with no special treatment required
- Non-galling and non-seizing properties
- Low coefficient of friction ensuring long running life
- Absorbs shock and vibration
- Increase in hydraulic efficiency, improving pump performance

Contact CPI, part of the Howden group, for proper design and application of PUMPGUARD products and materials.

Typical properties	Metric	Imperial
Tensile strength	35 MPa	5,000 psi
Elongation	1-2%	1-2%
Coefficient of thermal expansion	$40 \times 10^{-6} / ^\circ\text{C}$	$2.2 \times 10^{-5} / ^\circ\text{F}$
Hardness (Shore 'D')	80-85	80-85
Specific gravity	1.5	1.5
Water absorption	< 1%	< 1%
Mean temperature limits	-50° to +250°C	-60° to +480°F
Melting point	> 300°C	> 570°F
Flexural strength	91 MPa	13,200 psi
Compressive strength	114 MPa	16,500 psi

Note: The values above are for reference only and are not intended for specification or quality control purposes.