

CRANE-FOIL™

FLEXIBLE GRAPHITE GASKET

Technical Specification



Product Description

John Crane's Crane-foil™ is a premium grade flexible graphite gasket material used in a wide range of services, where conventional gaskets will not withstand extreme temperature and/or pressures. Crane-foil gaskets feature the benefits of graphite including resistance to most fluids, high temperatures, and pressure changes. They provide excellent sealing, preventing product leakage, and minimizing change outs. Resistance to cold flow, weathering and aging make Crane-foil ideal where increased reliability is necessary. Crane-foil has excellent compressibility characteristics under moderate loads, further reducing costs associated with installation and bolt retorquing.

Stainless steel inserted gaskets provide additional strength for higher pressure applications and additional resistance to damage from handling and installation. They are highly recommended for narrow cross section gaskets.

Construction/Features

Crane-foil sheet and gaskets are manufactured from high purity exfoliated graphite, precisely calendered into a foil. It contains no fillers or binders that can lead to fluid contamination. Standard Crane-foil is 97% pure graphite at a density of 70 lb/ft³ with corrosion inhibitors and special densities available upon request.

- Style 245: Homogeneous or laminated industrial grade
- Style 242: Mechanical bonded, stainless steel wire mesh inserted
- Style 247: Mechanical bonded, stainless steel perforated inserted
- Style 264: Adhesive bonded, stainless steel inserted

Performance Capabilities

- Temperature: Oxidizing: -240°C to 455°C/ -400°F to 850°F
Non-Oxidizing: -240°C to 3000°C/-400°F to 5432°F
Steam: up to 650°C/1200°F
Stainless Inserted: -240°C to 1000°C/-400°F to 1800°F
- Pressure: up to 136 bar/2000 psi
- Stainless Inserted: Up to 680 bar/10,000 psi
- P x T Maximum: 1,600,000 (°F x psi) / 58,000 (°C x bar)
- pH Range: 0-14 (Except strong oxidizers)

Standard Sizes

Roll Form: Style 245: Width: 24" x 24"
Thickness: 0.005", 0.10", 0.015", 0.025"
Length: Up to 100 ft.

Sheet Form: Styles 242, 247, 264
Square: 24" x 24", 40" x 40", 60" x 60"*
Thickness: 1/32", 1/16", 3/32", 1/8"

All styles are available cut to size.

*Style 247 not available in 60"x60" sheet

Typical Properties

Density	70 lb/ft ³ (1.1 gm/cc)
Min. carbon content	95%
Max. leachable chloride content	100 ppm
Compressibility (ASTM F-36)	40%
Recovery (ASTM F-36)	20%
Sealability (ASTM F-37)	0.5 ml/hr
Creep relaxation (ASTM F-38)	5%
Tensile strength	750 psi (5.2 MPa)
Co-efficient of friction against steel	
@ 4 psi (.03 MPa)	.018
@ 8 psi (.05 MPa)	.052
@ 12 psi (.08 MPa)	.157

Thermal conductivity	
Length/width	960 Btu-in/ft ₂ -H-°F 140W/M-K
Thru thickness	36 Btu-in/ft ₂ -H-°F 4W/M-K
Nuclear radiation resistance	
5.5x10 ²¹ NVT@1000°C	No apparent effect
1.5x10 ⁹ RADS gamma radiation	No apparent effect

Leakage-Internal Pressure-Gasket Stress Chart

