

Flexible Graphite

Product Description: Homogeneous foil of compressed high purity exfoliated mineral graphite, no binders or fillers.

Main Physical and Chemical Properties

Bulk Density: 62.4 lb/cu.ft. (1.0 g/cc), or 70 lb/cu.ft. (1.1 g/cc)

Tensile Strength: 650 psi (4.4 Mpa) – 740 psi (5.0 Mpa) Carbon Content: 99% Min. Ash Content: 1% Max.

Sulfur Content: 1000 ppm Max. Leachable Chloride Content: 50 ppm Max

Other Properties

Working Temperature Range:

Oxidizing Atmosphere, such as air: -400F to 950F (-240C to 510C)

Mild Oxidizing Atmosphere of most gasket applications: -400 F to 1500 F (-240C to 850 C)

Non-Oxidizing Atmosphere: -400 F to 5400 F (-240C to 3000 C)

Thermal Conductivity:

Parallel to Sheet Surface: 960 BTU-in/ft².h.F (140 W/m.K)

Through Thickness: 36 BTU.in/ ft².h.F (5W/m.K)

The information and statements herein are based on our best knowledge, but are not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake their own verification and testing to determine the suitability for their own particular purpose of any information referred to herein.

Coefficient of Friction (Against Steel): 0.018 @ 4 psi (0.03Mpa), 0.157 @ 12 psi (0.08 Mpa)

Compressibility (ASTM F-36) 44%

Recovery (ASTM F36) 15%

Creep Relaxation (ASTM F-38) Less than 5%

Sealability (ASTM F-37) 0.017 fluid ounce/hr (0.5ml/hr)

Applications

As gasket material, directly or in forms of graphite laminates, flexible graphite is widely used in various fluid sealing applications: flange gasket, spiral wound gasket, heat exchanger gasket, die- formed rings etc. Flexible graphite can also be used as solid lubricant in metal stamping and forming applications, as heat liner in industrial furnaces and other heating devices. Flexible graphite is also finding more and more new applications which include EMI (electromagnetic interference) shielding & gasketing, heat dissipation, stress

sensing, vibration damping, spark plasma sintering (SPS), and other thermal or electronic or electrochemical applications.