



## Product Data Sheet - Flexicarb LS

### Product Characteristics

#### Graphite Composition

- Resistant to a wide range of temperatures
- Resistant to a wide range of pressure changes.
- Resistant to fluids with pH range of 0-14, except strong oxidizers.
- Excellent weather and aging characteristics.
- Low creep relaxation.
- Seals easily under moderate bolt loads.

#### Inserts

- Reduces gasket damage in handling and installation.
- Extra strength when narrow cross section gasketing is required.
- Useful for higher pressures.

#### No Binders

- Eliminates potential fluid contamination from binder residue.
- No gaseous decomposition products.

#### Variety of Densities and Sizes

- Useful for a wide range of applications.

#### Chemical Resistance

- Chemically resistant to a wide variety of materials. Call for specific application or comprehensive resistance chart.

### Typical Properties

Property	Units	Value
Bulk Density	lb/ft <sup>3</sup> (gm/cc)	70.0 (1.1)
<b>Thermal Conductivity</b>		
"a" Direction (parallel to surface)	BTU-in/hr-ft <sup>2</sup> °F	1532
"c" Direction (normal to surface)	BTU-in/hr- ft <sup>2</sup> °F	48
<b>Thermal Expansion</b>		
70-1800°F (bulk density 1.7-1.9gm/cc)	10 <sup>-6</sup> /°F	2.8-4.4
<b>Hardness (Shore Scleroscope)</b>		
At 1.0 gm/cc	-	30
At 1.3 gm/cc	-	40
<b>Tensile Strength</b>		
At 1.1 gm/cc and .015" foil	psi	700 min.
<b>Permeability</b>		
Air	Cm <sup>2</sup> /gm	<0.00002
<b>Emissivity</b>		
At 932°F	-	04
<b>Sublimation Temperature</b>		
(does not melt)	°F	6600
<b>Compression</b>		
		40%
<b>Recovery</b>		
		20%
<b>Creep Relaxation</b>		
		<5%

### Performance Advantages

- Non-toxic
- Excellent thermal stability
- Highly anisotropic
- Very low thermal expansion characteristics
- Low electrical resistivity
- Low coefficient of friction
- High thermal conductivity
- Low modulus of elasticity, highly flexible
- Easy conformability to surface irregularities
- Non-abrasive
- Low gas permeability
- Nuclear certifiable, high purity
- Chemically inert

### Specifications

Temperature, min.	-400°F / -240°C
Temperature, max.	842°F / 450°C
M-factor, stress	2
Y-factor, psi	1000
Maximum Stress	25,000 psi
pH Range	0-14 (few exceptions)
Standard Sheet Thicknesses**	1/16", 1/8"
<b>Standard Sizes**</b>	
Sheets	Homogeneous & Laminated 40"x 40", 60"x 60"
Densities**	0.7 to 1.4 gm/cc
**Other thicknesses, sizes and densities available.	