



## Garlock HOCHDRUCK®-HT Graph-Lock® Style 3128-HT

### MATERIAL PROPERTIES\*

|                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Composition:</b>                                   | Graphite with multiple 0.002" 316SS foil inserts<br>-A multilayer, high strength sheet material composed of .020" thick layers of high purity flexible graphite foil (carbon >99.85%) and .002" thick layers of 316 stainless steel foil insert. Depending on the sheet thickness, several layers of graphite and stainless steel are bonded together in a proprietary process; no adhesive is used. Maximum ash content is 0.15%. |
| <b>Color:</b>                                         | Black                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Temperature<sup>2</sup>, °F (°C)</b>               |                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Minimum:                                              | -400 (-240)                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Continuous Max:                                       | +1000 (+540)                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Pressure<sup>2</sup>, Maximum, psig (bar):</b>     | 2000 (138)                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>P x T (max.)<sup>2</sup>, psig x °F (bar x °C)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 1/8":                                                 | 700,000 (25,000)                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 1/8":                                                 | 350,000 (12,000)                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Meets Specification:</b>                           | Fire Safe                                                                                                                                                                                                                                                                                                                                                                                                                          |

### PHYSICAL PROPERTIES\*

|                   |                                                              |             |
|-------------------|--------------------------------------------------------------|-------------|
| <b>ASTM F36</b>   | <b>Compressibility, %:</b>                                   | 30-40       |
| <b>ASTM F36</b>   | <b>Recovery, %:</b>                                          | 20          |
| <b>ASTM F38</b>   | <b>Creep Relaxation, %:</b>                                  | 10          |
| <b>ASTM F152</b>  | <b>Tensile, Across Grain, psi (N/mm<sup>2</sup>):</b>        | 4500 (31)   |
| <b>DIN 52913</b>  | <b>Stability Under Stress, % (N/mm<sup>2</sup>):</b>         | 96          |
| <b>ASTM F1315</b> | <b>Density, lbs./ft.<sup>3</sup> (grams/cm<sup>3</sup>):</b> | 70 (1.12)   |
| <b>ASTM F104</b>  | <b>Line Call Out:</b>                                        | F527000B2M8 |

### SEALING CHARACTERISTICS\*

|                                             | <b>ASTM F37B<br/>Fuel A</b> | <b>ASTM F37B<br/>Nitrogen</b> | <b>DIN 3535- 4<br/>Gas Permeability</b> |
|---------------------------------------------|-----------------------------|-------------------------------|-----------------------------------------|
| <b>Gasket Load, psi (N/mm<sup>2</sup>):</b> | 500 (3.5)                   | 3000 (20.7)                   | 4640 (32)                               |
| <b>Internal Pressure, psig (bar):</b>       | 9.8 (0.7)                   | 30 (2)                        | 580 (40)                                |
| <b>Leakage</b>                              | <b>2.0 ml/hr.</b>           | <b>0.1 ml/hr.</b>             | <b>0.4 cc/min</b>                       |

### Chemical Impurity Data

| <b>Chemical Limits</b>             |    |                                         |     |
|------------------------------------|----|-----------------------------------------|-----|
| <b>Leachable Levels, Max., ppm</b> |    | <b>Total Chemical Limits, Max., ppm</b> |     |
| <b>Chlorides:</b>                  | 20 | <b>Total Chlorides:</b>                 | 20  |
| <b>Fluorides</b>                   | 20 | <b>Total Sulfur:</b>                    | 600 |

#### Notes:

This is a general guide and should not be the sole means of selecting or rejecting this material. ASTM test results in accordance with ASTM F-104; properties based on 1/32" (0.8mm) sheet thickness unless otherwise mentioned.

\* Values do not constitute specification Limits

<sup>2</sup> Based on ANSI RF flanges at our preferred torque. When approaching maximum pressure, continuous operating temperature, minimum temperature or 50% of maximum PxT, consult Garlock Applications Engineering.