PLANIGRAPH™ METALBOND

Composition

Expanded graphite C> 98.00% with tanged foil inserted and inner steel eyelet. Since the graphite does not come into direct contact with the fluid the mechanical properties of the seal remain unchanged over time, guaranteeing a longer joint operating life and a drastic reduction of fugitive emissions with greater safety.

Characteristics

Metalbond is the graphite gasket with inner eyelet that increases the effectiveness of the seal. It is the solution that allows a minimum diffusion of the fluid through the most stressed part of the gasket. At the same time it is an economical and long service gasket because the eyelet prevents the erosion of the inner edge of the seal and avoid the permeation of the fluid through the graphite.

Applications

Graphite gaskets for flanges. The graphite doesn't work with oxidizing fluids.

Tech Data

Planigraph™ Metalbond 2.00 mm thk.

Graphite density	gr/cm3	1.0
Carbon Content	%	> 98.0
Ash Content	%	< 2.0
Material of insert	AISI	316L
Thickness of insert	mm	0.10
Compressibility	%	35 - 45
Recovery	%	15 - 20
Gas Permeability DIN 3535	cm3/min	< 0.6
Relaxation stress DIN 52913	N/mm2	> 45
Temperature max with steam	°C	550
Temperature max with weak oxidants	°C	450
Temperature min cryo	°C	-196
Maximum assembly load RT	N/mm2	120

- Never use the product at its maximum rated temperature and pressure simultaneously. Consult the manufacturer for further information.
- When used with weakly oxidizing agents or hot air, the temperature shall not exceed **450 °C**.
- Flexible graphite and carbon yarn shall not be used with oxidizing fluids.

Thickness	1,5 ÷ 3,0 mm	1/16" ÷ 1/8"



Planigraph™ Metalbond

The Planigraph™ sales program includes the following items Premium grade and Industrial Grade:

- LG without insert
- LGR with single smooth insert
- LGRF with single or multiple tanged inserts
- LGRHDI with multiple smooth inserts

The maximum allowable load on expanded graphite gaskets depends on the type and number of metallic inserts and is closely related to the effective sealing area. Verification requires calculating the ratio [(De–Di)/thk], where **De** and **Di** are the diameters of the area actually compressed between the flanges and **thk** is the gasket thickness. The ratio must be ≥ 4. On WN RF flanges, the gaskets can be used up to class 300 psi.

The Planigraph™ line also includes corrugated graphite tapes for maintenance:

- NG – corrugated tape in expanded mineral graphite
- NGA – adhesive corrugated tape in expanded mineral graphite

The information provided in this publication, as well as that supplied to users in other forms, is based on our experience and communicated according to the best knowledge available. However, since numerous factors beyond our knowledge and control may influence the use of the products, no warranty, explicit or implicit, is given regarding such content. The operating limits indicated do not constitute confirmation that these values can be applied simultaneously. Avoid using the product at the maximum temperature and pressure limits. The maximum temperature is sustainable only for short periods under specific conditions. Specifications may be changed without notice. The images in the DS may not exactly represent the product, its color and/or marking.

CARRARA® GLOBAL SEALING SOLUTIONS

Carrara S.p.A.,
Via Provinciale 1/E - 25030 Adro - BS - Italia
tel. +39 030 7451121 carrara.it - info@carrara.it