



# PLANIGRAPH™ METALBOND

## Composition

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.

## Characteristics

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.

## Applications

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

## Tech Data

Planigraph™ Metalbond 2.00 mm th.

|                                    |         |         |
|------------------------------------|---------|---------|
| 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 to the maximum temperature and pressure associated. Consult the manufacturer for further information
- With weakly oxidizing agents and hot air the temperature must be limited to 450 ° C
- Graphite and carbon cannot be used with oxidizing fluids

|           |  |                       |
|-----------|--|-----------------------|
| Size      | Disponibile in tutti i sizes standard o customizzati | Available in all size |
| Thickness | da 1,5 a 3,0 mm                                      | from 1/16             |



## Planigraph™ Metalbond

Metalbond seals great gaskets because the steel ring prevents the erosion of the inner edge of the seal. The pressure for using the gasket is strongly correlated to the sealing surface and it is always better to check the ratio between [De-Di] and the thickness of the gasket where De and Di refer to the diameters of the parts of the gasket under the compression of the flanges. The ratio must be at least 4 and in this case the maximum compression allowed on the gasket is 70 MPa. The maximum load allowed on the gasket is 120 Mpa. For sealing the WN RF flanges Metalbond gaskets are applicable up to the pressure class 300 psi. Metalbond™ is made from LGRF Planigraph™ but can also be made with LGR with smooth reinforcement and LGRHDI with multi layers reinforcement. Metalbond™ is also available in the style with external protection ring.



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