

# GRAFILIT® SL

GRAFILIT® SL is an expanded graphite based material with stainless steel foil insert, thus facilitating its handling and enhances the surface load. GRAFILIT® SL has excellent chemical and thermal resistance. Its high creep resistance and high compressibility make it suitable for highly demanding conditions in the chemical and petrochemical industries.



|                           |                                                                                                                                         |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Composition               | Expanded graphite, Stainless steel foil insert (AISI 316; 0.05 mm)                                                                      |
| Color                     | Black                                                                                                                                   |
| Approvals and compliances | BAM (oxygen)                                                                                                                            |
| Sheet dimensions          | Sizes (mm):1000 x 1000   1500 x 1500<br>Thicknesses (mm):1   1.5   2   3<br>Rolls:/<br>Other sizes and thicknesses available on request |
| Tolerances                | ± 20 mm on length and width   On thickness up to 1.0 mm ± 0.1 mm   On thickness above 1.0 mm ± 10 %                                     |
| Surface finish            |                                                                                                                                         |

## TECHNICAL DATA for 2 mm

|                                     |             |          |      |
|-------------------------------------|-------------|----------|------|
| Density                             | DIN 28090-2 | g/cm3    | 1.3  |
| Density (plain graphite)            | DIN 28090-2 | g/cm3    | 1.0  |
| Total sulfur content                | ASTM D5016  | ppm      | /    |
| Leachable chloride content          | FSA NMG 202 | ppm      | 20   |
| Leachable fluoride content          | FSA NMG 202 | ppm      | 20   |
| Leachable halogen content           |             |          | /    |
| Ash content                         | DIN 51903   | %        | <1   |
| Weight loss (air, 670°C, 4 h)       | DIN 28090-2 | %/h      | /    |
| Compressibility                     | ASTM F36A   | %        | 42   |
| Recovery                            | ASTM F36A   | %        | 15   |
| Tensile strength                    | ASTM F152   | %        |      |
| Longitudinal                        |             | MPa      | /    |
| Transversal                         |             | MPa      | /    |
| Residual stress                     | DIN 52913   |          |      |
| 50 MPa, 300°C, 16 h                 |             | MPa      | 49   |
| Specific leak rate                  | DIN 3535-6  | mg/(s·m) | 0.05 |
| Thickness increase                  | ASTM F146   |          |      |
| Oil IRM 903, 150°C, 5 h             |             | %        | /    |
| ASTM Fuel B, 23°C, 5 h              |             | %        | /    |
| Compression modulus                 | DIN 28090-2 |          |      |
| At room temperature: εKSW           |             | %        | /    |
| At elevated temperature: εWSW/300°C |             | %        | /    |
| Creep relaxation                    | DIN 28090-2 |          |      |
| At room temperature: εKRW           |             | %        | 38   |
| At elevated temperature: εWRW/300°C |             | %        | 1.2  |

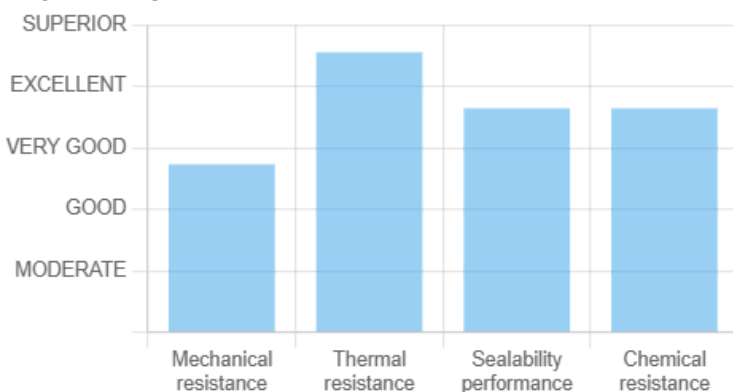
## APPROPRIATE INDUSTRIES & APPLICATIONS

-  CHEMICAL INDUSTRY
-  COMPRESSORS & PUMPS
-  GAS SUPPLY
-  HEATING SYSTEMS
-  HIGH-TEMPERATURE APP.
-  PETROCHEMICAL INDUSTRY
-  POTABLE WATER SUPPLY
-  POWER PLANT
-  REFRIGERATION & COOLING
-  STEAM SUPPLY
-  VALVES
-  WATER SUPPLY

| Operating conditions                 |         |           |
|--------------------------------------|---------|-----------|
| Minimum temperature                  | °C/°F   | -200/-328 |
| Maximum continuous temperature       |         |           |
| – under oxidizing atmosphere         | °C/°F   | 550/1022  |
| – under reducing or inert atmosphere | °C/°F   | 700/1292  |
| Maximum pressure                     | bar/psi | 100/1450  |

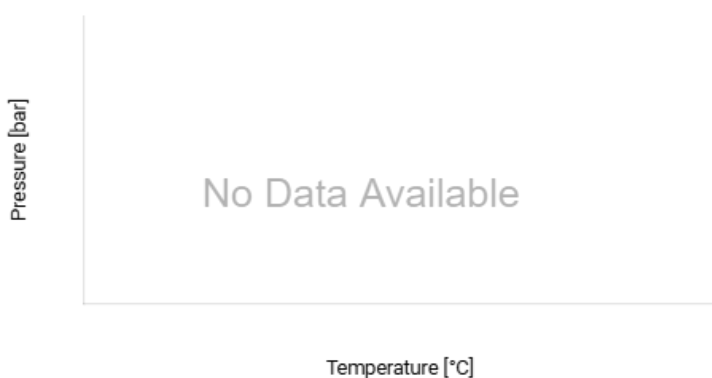
# GRAFILIT® SL

## PROPERTIES

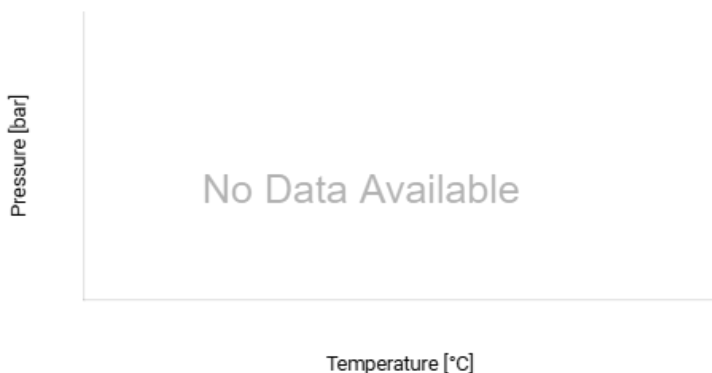


## P-T DIAGRAMS EN 1514-1, Type IBC, PN 40, DIN 28091-2 / 3.8, 2 mm

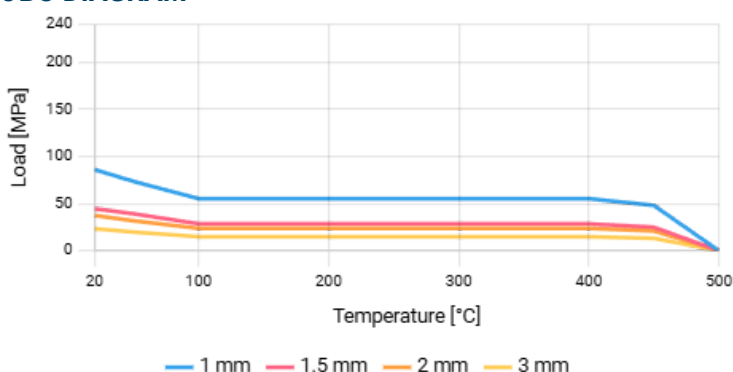
### Aggressive gasses



### Liquids



## σBO DIAGRAM DIN 28090-1



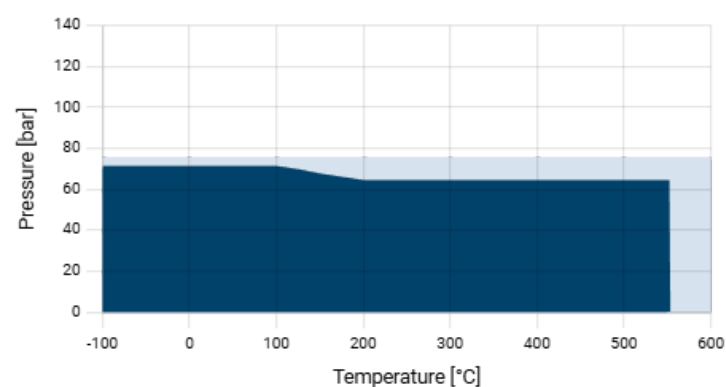
## CHEMICAL RESISTANCE CHART



## EN 13555



### Steam or gasses



### Legend:

- General suitability - Under common installation practices and chemical compatibility.
- Conditional suitability - Appropriate measures ensure maximum performance for joint design and gasket installation. Technical consultation is recommended.
- Limited suitability - Technical consultation is mandatory.

P-T diagrams indicate the maximum permissible combination of internal pressure and service temperature which can be simultaneously applied to a given gaskets thickness, size and tightness class. Given the wide variety of gasket applications and service conditions, these values should only be regarded as a guidance for the proper gasket assembly. In general, thinner gaskets exhibit better P-T properties.

σBO diagrams represent σBO values for different gasket material thicknesses. These values indicate the maximum in-service compressive pressures which can be applied on the gasket area involved without destructing or damaging the gasket material.

All information and data quoted are based upon decades of experience in the production and operation of sealing elements. This data may not be used to support any warranty claims. With its publication this latest edition supersedes all previous issues and is subject to change without further notice.

