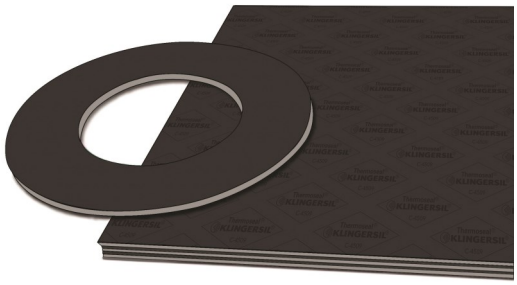
# KLINGERSIL® C-4509

Special high-pressure gasket material for highest thermal and mechanical stresses

KLINGERSIL® C-509 is a special high pressure gasket material that offers excellent service in many sectors of the chemical industry. Main fields of application: alkaline media and steam. The expanded metal reinforcement is a galvanized low carbon steel insert which increases the compressive strength and pressure capability. Suitable for high-pressure applications because of its higher resistance against blow outs.



This material is manufactured with carbon fibers and special high temperature resistance additives and reinforced with a nitrile binder.

## TYPICAL VALUES REFER TO 1/16" THICK MATERIAL UNLESS NOTED

| | |
|---|---|
| Creep relaxation **ASTM F38B** (1/32") | 20 % |
| Compressibility **ASTM F36J** | 8 - 14 % |
| Recovery **ASTM F36J** | 50 % minimum |
| KLINGER Hot Compression Test | |
| Thickness Decrease 73°F (23°C) | 10 % initial |
| Thickness Decrease 572°F (300°C) | 8 % additional |
| Weight Increase **ASTM F146** after immersion in | |
| Fuel B, 5h/73°F (23°C) | 10 % maximum |
| Thickness Increase **ASTM F146** after immersion in | |
| ASTM Oil IRM 901, 5h/300°F (149°C) | 0 - 5 % |
| ASTM Oil IRM 903, 5h/300°F (149°C) | 0 - 3 % |
| ASTM Fuel A, 5h/73°F (23°C) | 0 - 5 % |
| ASTM Fuel B, 5h/73°F (23°C) | 0 - 5 % |
| Density **ASTM F1315** | 125 lb/ft$^3$ (2.0 g/cc$^3$) |
| **ASTM F104** Line Call Out | F712112B3E11M8 |
| Color | Black |

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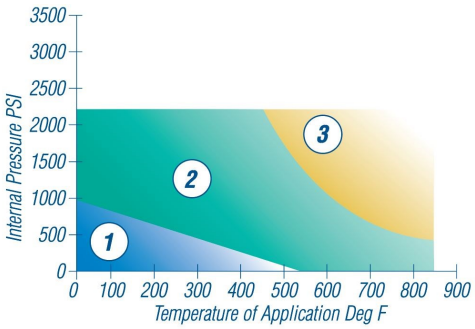
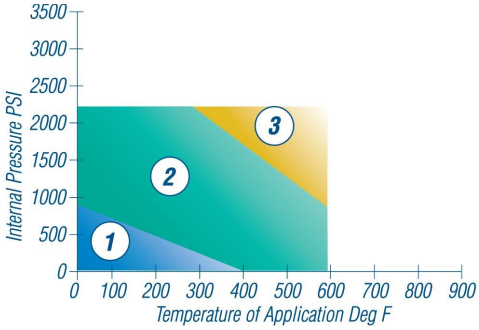
The pressure/temperature graphs shown are the most current method of determining the suitability of a gasket material in a known environment. However, chemical compatibility must also be considered.

pT diagram for thickness 1/16":

LIQUIDS




GASES & STEAM




In area ① the gasket material is suitable using common installation practices subject to chemical compatibility.

In area ② appropriate measures are necessary for installation of the gasket to ensure maximum performance. Please call or refer to KLINGERexpert for assistance.

In area ③ do not install gaskets in these applications without first referring to KLINGERexpert or contacting Thermoseal Inc.'s technical support service.

The ability of a gasket to make and maintain a seal depends not only on the style and quality of the gasket material, but also on medium being sealed, the flange design, the amount of pressure applied to the gasket by the bolts and how the gasket is assembled onto the flanges and tightened. These factors are beyond the manufacturer's control.

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