

# KLINGERSIL® C-4509

KLINGERSIL® C-4509 is a special high-pressure gasket for highest thermal and mechanical stresses. Due to the expanded metal reinforcement it offers a high stress capability and is suitable for high bolt loads. The basic material KLINGERSIL® C-4500 is a Fire Safe grade.

Carbon fibres and special high temperature resistant additives, bonded with NBR. Made from high-tech materials it offers excellent service in many sectors of the chemical industry. Main fields of application: alkaline media and steam.



## Key features:

- » Utilization of carbon fibres
- » Expanded metal reinforcement
- » Improved stress relaxation

## Benefits:

- » Suitable for high-pressure applications
- » Higher resistance against blow-outs
- » More safety at high internal pressures

## Certificates and approvals:

- » German Lloyd

## Properties: referring to KLINGERSIL® product range

SUPERIOR				
EXCELLENT				
VERY GOOD				
GOOD				
MODERATE				
	MECHANICAL RESISTANCE	THERMAL RESISTANCE	SEALABILITY	CHEMICAL RESISTANCE

## Industries:



## Typical technical data for thickness 2.0 mm:

Compressibility ASTM F 36 J		%	12
Recovery ASTM F 36 J		%	65
Stress relaxation DIN 52913	50 MPa, 16 h/300°C	MPa	39
Stress relaxation BS 7531	40 MPa, 16 h/300°C	MPa	38
KLINGER cold/hot compression	thickness decrease at 23°C	%	9
50 MPa	thickness decrease at 300°C	%	7
Thickness increase after fluid	oil IRM 903: 5 h/150°C	%	3
immersion ASTM F 146	fuel B: 5 h/23°C	%	5
Density		g/cm <sup>3</sup>	2.0
<b>ASME-Code sealing factors</b>			
for gasket thickness 1.0 mm	tightness class 0.1 mg/s x m	MPa	y 30 m 3.1
for gasket thickness 2.0 mm	tightness class 0.1 mg/s x m	MPa	y 30 m 4.4
for gasket thickness 3.0 mm	tightness class 0.1 mg/s x m	MPa	y 30 m 6.0

## Dimensions of the standard sheets:

### Sizes KLINGERSIL® C-4509:

1000 x 1500 mm, 2000 x 1500 mm

### Sizes KLINGERSIL® C-4509 L:

1000 x 1230 mm, 2000 x 1230 mm

### Thicknesses:

1.0 mm, 1.5 mm

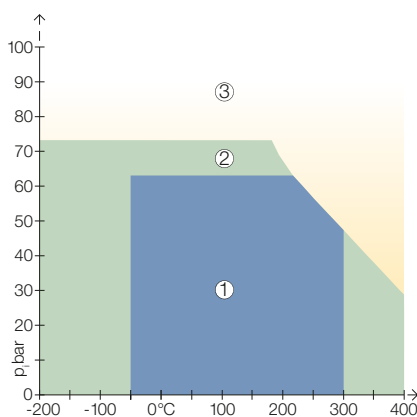
### Tolerances:

Thickness acc. DIN 28091-1

Length  $\pm$  50 mm, width  $\pm$  50 mm

Other thicknesses, sizes and tolerances on request.

## pT diagram for thickness 1.5 mm:



①

In area one, the gasket material is normally suitable subject to chemical compatibility.

②

In area two, the gasket material may be suitable but a technical evaluation is recommended.

③

In area three, do not install the gasket without a technical evaluation.

Always refer to the chemical resistance of the gasket to the media.

