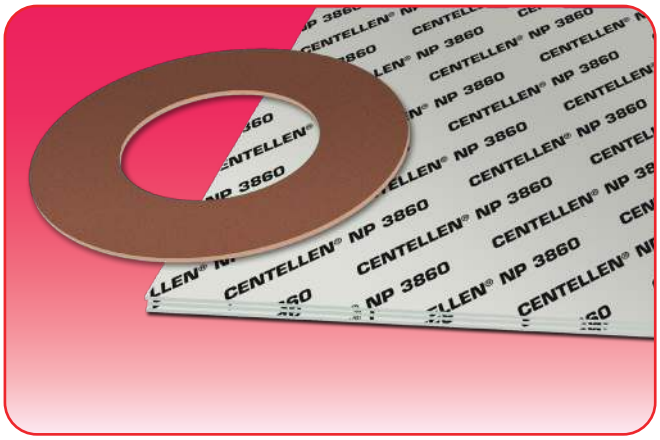
CENTELLEN® NP 3860

CENTELLEN NP 3860 – special material with excellent chemical resistance to refrigerants.

CENTELLEN NP 3860 is a special gas tight material designed for applications with refrigerants. The gasket sheet is a calandered material. It consists of aramid fibers and inorganic filler and a combination of NBR and CR as binder.
As a result the material is resistant to most refrigerants like freons, dichloromethane, hydrocarbons like oils, glycole as well as weak alkalines and organic acids. The gasket material is only partly suitable for ketone and ester.

Manufactured by KLINGER



Basis composition	Aramid fibers bonded with NBR and CR.
Color	Red / White
Certificates	TA Luft (Clean air)

Sheet size	1000 x 1500 mm, 2000 x 1500 mm
Thickness	0.5 mm, 1.0 mm, 1.5 mm, 2.0 mm, 3.0 mm Other thicknesses on request

Tolerances

Thickness according to DIN 28091-1
Length: ± 50 mm
Width: ± 50 mm

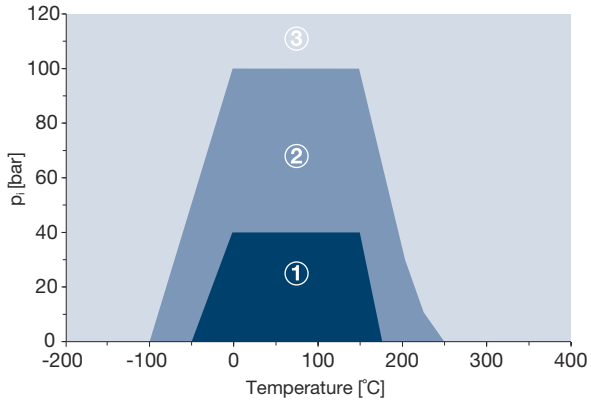
Industry
General Industry / Chemical / Oil & Gas / Energy / Infrastructure

TECHNICAL DATA - Typical values for a thickness of 2.0 mm

Density		g/cm³	1.8
Compressibility	ASTM F 36 J	%	9
Recovery	ASTM F 36 J	%	55
Stress relaxation DIN 52913	50 MPa, 16 h/175°C	MPa	33
	50 MPa, 16 h/300°C	MPa	22
KLINGER cold/hot compression	thickness decrease at 23°C	%	12
50 MPa	thickness decrease at 300°C	%	18
Tightness	DIN 28090-2	mg/(s x m)	0.06
Thickness increase after fluid	oil IRM 903: 5 h/150°C	%	10
immersion ASTM F 146	fuel B: 5 h/23°C	%	10
Cold compression	DIN 28090-2	%	8
Cold recovery	DIN 28090-2	%	4
Hot compression	DIN 28090-2	%	15
Hot recovery	DIN 28090-2	%	2
Max. surface pressure EN 13555	23°C	N/mm²	> 200
	200°C	N/mm²	> 200
	250°C	N/mm²	> 200

CENTELLEN® NP 3860

P-T diagram



The area of the P-T diagram

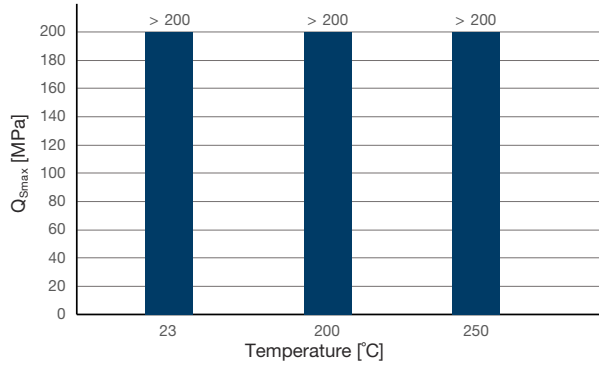
① In area one, the gasket material is normally suitable subject to chemical compatibility.

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.

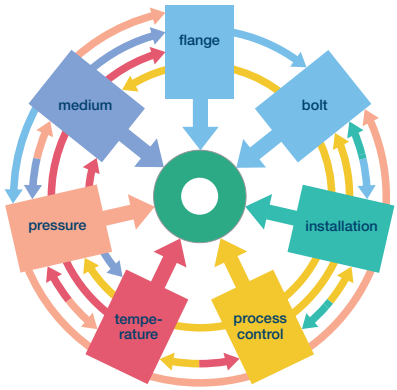
Maximum surface pressure



Maximum permissible surface pressure in operating conditions Q_{Smax} acc. to EN 13555

The maximum surface pressure in operating condition is the maximum permissible surface pressure the gasket can be loaded at the specified temperatures, without crucial plastic deformation and/or destruction of the gasket.

Tightness performance



The many and varied demands on gaskets

The functionality and tightness of flange connections depends on a large number of parameters. Maximum temperature and pressure values alone can not define a material's suitability for an application. These limits are dependent upon a multiplicity of factors as shown in the picture on the left. A statement about the expected tightness of the flange connection is only possible if a qualified and defined installation of the gasket has been executed.

Chemical resistance chart

Simplified overview of the chemical resistance depending on the most important groups of raw materials:

CENTELLEN® NP 3860 — **A**: small or no attack — **B**: weak till moderate attack — **C**: strong attack

Paraffinic hydrocarbon	Motor fuel	Aromates	Chlorinated hydrocarbon fluids	Motor oil	Mineral lubricants	Alcohol	Ketone	Ester	Water	Acid (diluted)	Base (diluted)
B	C	C	C	B	C	A	B	C	A	A	A

All information is based on years of experience in production and operation of sealing elements. However, in view of the wide variety of possible installation and operating conditions one cannot draw final conclusions in all application cases regarding the behaviour in gasket joint. The data may not, therefore, be used to support any warranty claims. This edition cancels all previous issues. Subject to change without notice.

Certified acc. to DIN EN ISO 9001:2015 Subject to technical alterations. Status: May 2025
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