

# novaphit® EXTRA

The high-pressure gasket material  
made of **expanded graphite**  
with **stainless steel**  
**wire mesh reinforcement**



## Material profile

Gasket material made of expanded graphite (purity 99 % min.) with a stainless steel wire mesh insert (material no. 1.4301/AISI 304).

## Typical applications

- High thermal and mechanical loads as well as frequently changing loads.
- All-purpose use in wide areas of the chemical industry.
- Pumps, fittings, pipelines with flanges in the general and chemical industry.

## Excellent workability

novaphit® EXTRA can be processed very effectively with standard die-cutting equipment. Due to the thin stainless steel wire mesh and the low mesh size novaphit® EXTRA can be cut with scissors directly at site. The XL sheet size 1500 x 1500 mm offers added value with regard to large size gaskets made from one piece.

## Good for people and the environment

Frenzelit has obtained certification that the company complies with the requirements of both ISO/TS 16949 and ISO 14001. This means complete transparency in all areas and a high degree of security for our customers.

Do you have any questions about your application? The gasket information service will help you:

[gaskets@frenzelit.de](mailto:gaskets@frenzelit.de)

GASKETS

TECHNICAL TEXTILES

EXPANSION JOINTS

INSULATION

NEW MATERIALS

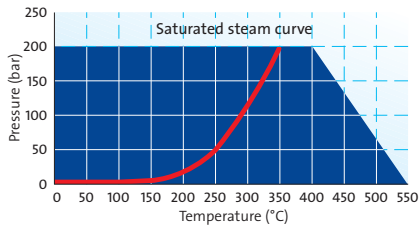


creating  
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solutions

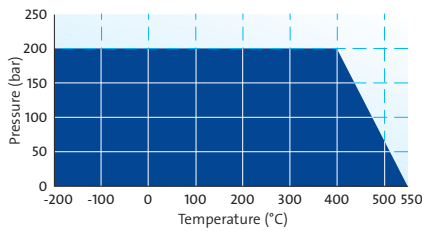
# Technical information about novaphit® EXTRA

## Recommendations for use according to pressure and temperature

### Water/steam



### Other Media\*



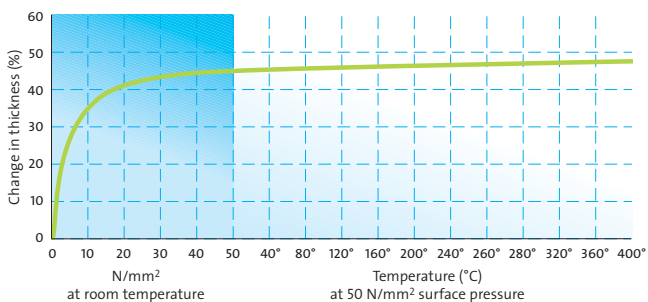
The temperature and pressure recommendations in the graphs apply to gaskets with a thickness of 2.0 mm and smooth flanges. Higher stresses are possible when thinner gaskets are used!

\*Example for the most common other media. Exact data for specific individual cases are available in the Frenzelit novaDISC programme or contact our application engineering specialists.

#### Warranty exclusion

In view of the variety of different installation and operation conditions and application and process engineering options, the information given in this prospectus can only provide approximate guidance. There is as a result no basis for warranty claims.

## Deformation under temperature 2.0 mm



## Material data

### General Data

Binders	without organic binder		
Colour	graphite		
Sheet sizes and thickness tolerance	acc. DIN 28 091-1		

### Physical properties

Gasket thickness 2.0 mm	Standard	Unity	Value*
Identification	DIN 28 091-4		GR-10-I-1M-Cr
Density	DIN 28 090-2	[g/cm³]	1.20
Tensile strength	DIN 52 910		
longitudinal		[N/mm²]	8
transverse		[N/mm²]	7
Residual stress $\sigma_{dE/16}$	DIN 52 913		
175 °C		[N/mm²]	46
300 °C		[N/mm²]	45
Compressibility	ASTM F 36 J	[%]	40
Recovery	ASTM F 36 J	[%]	10
Cold compressibility $\epsilon_{KSW}$	DIN 28 090-2	[%]	40
Cold recovery $\epsilon_{KRW}$	DIN 28 090-2	[%]	4
Hot creep $\epsilon_{WSW/300}$	DIN 28 090-2	[%]	2.5
Hot recovery $\epsilon_{WRW/300}$	DIN 28 090-2	[%]	3
Recovery R	DIN 28 090-2	[mm]	0.060
Specific leakage rate	DIN 3535-6	[mg/(s·m)]	≤ 0.250
Specific leakage rate $\lambda_{2,0}$	DIN 28 090-2	[mg/(s·m)]	≤ 0.250
Fluid resistance	ASTM F 146		
ASTM IRM 903	5h/150°C		
Weight change		[%]	33
Thickness increase		[%]	5
ASTM Fuel B	5h/23°C		
Weight change		[%]	33
Thickness increase		[%]	5
Chloride content	DIN 28 090-2	[ppm]	≤ 50

\* = Mode (typical value)

### Product data

- Dimensions in mm: 1500 x 1500
- Thicknesses in mm: 1.0/1.5/2.0/3.0
- Further dimensions and thicknesses are available on request

### Installation instructions

- Clean the contact areas, remove old gasket material without damaging the surface of the flange.
- Check whether the flange surfaces are parallel and even and make adjustments if necessary.
- Check gaskets that have been stored in a dry place for cracks, surface damage and dimensional accuracy before installing them. In the case of gaskets with holes in them, make sure the hole pattern coincides with the holes in the flange.
- Do not use any auxiliary sealing agents!
- Check whether the screws are working properly before installing the gaskets and use new screws if necessary.
- Uniform and careful initial installation by hand.
- Use a torque wrench to tighten the screws diagonally in 3 stages (first of all with about 50 % torque, then with about 80 % and finally with 100 %).

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Frenzelit-Werke GmbH & Co. KG  
 P.O. Box 11 40 · 95456 Bad Berneck · Germany  
 Phone: +49 9273 72-0 · Fax: +49 9273 72-221  
 info@frenzelit.de · www.frenzelit.com

 **Frenzelit**

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 solutions