

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Gaskets and Sealings**

with type designation(s)
GRAFILIT EM, GRAFILIT IQ

Issued to

Donit Tesnit d.o.o.
Medvode, Slovenia

is found to comply with

DIN 52913
DIN 28090
DIN 3535-6
ASTM F36

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.

Type:	Temperature range:	Max. working press.:	Design:	Sizes:
GRAFILIT EM	see	manufacturer's	instructions	
GRAFILIT IQ	see	manufacturer's	instructions	

Issued at **Hamburg** on **2019-07-09**

This Certificate is valid until **2024-07-08** .

for **DNV GL**

DNV GL local unit: **Koper**

Approval Engineer: **Guido Friederich**

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Olaf Drews
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Product description

Flat gasket material, Type GRAFILIT IQ and GRAFILIT EM

GRAFILIT EM is a graphite-based gasket material reinforced with stainless steel insert.
GRAFILIT IQ is a gasket material based on expanded natural graphite combined with an anti-oxidation and anti-corrosion inhibitor reinforced with stainless insert.

Note ¹

Technical data	Standard	GRAFILIT EM	GRAFILIT IQ	Unit
Thickness range		1,0 to 3,0	1,0 to 3,0	mm
Density	DIN 28090-2	1,4	1,4	g/cm ³
Colour		Black	Silver	
Compressibility	ASTM F36A	35	35	%
Recovery	ASTM F36A	20	22	%
Stress resistance	DIN 52913 at 300°C	49	48	N/mm ²
Permeability	DIN 3535-6	0,05	0,05	mg/(s·m)

Note ²

Approvals

	Technical standards		
GRAFILIT EM	Fire Safe Test	TA-Luft	DIN-DVGW
GRAFILIT IQ	ISO 10497	VDI 2440	DIN 3535-6

Application

The above listed gasket material sheet type may be used under consideration of the mechanical and technical characteristics as well as physical and chemical properties for the following applications:

Ship's piping systems, pressurized items and machinery containing e.g. the following fluids: non-flammable gases, oil, fuel oil, water.

¹ Gasket materials GRAFILIT EM and GRAFILIT IQ do not contain asbestos minerals as required by SOLAS II-1, Part A-1, Regulation 3-5. [DONIT Asbestos Free Declaration, Document No: 05-2014]

² The selection of the gaskets for the corresponding application and appropriate installation has to be in accordance with the instructions of the manufacturer.

Limitation / Exclusions

Pipe lines for LNG and flammable gas systems, cryogenic fluids, cargo lines on chemical and gas tankers carrying flammable and/or noxious media, propylene oxide and mixtures of ethylene and propylene oxide.

Type Approval documentation

Marking of product

The flat gasket shall be clearly marked with the following minimum signs:

- Manufacturer's name / label
- Gasket sheet material non asbestos
- Product type

Periodical assessment

A condition for retention of the Type Approval Certificate in its validity period is that periodical assessments are successfully carried out.

The objective of the periodical assessment is to verify that the conditions for the type approval have not been altered.

- The main scope of the periodical assessment will normally include:
- Verification of the TA applicant's production and quality system w.r.t ensuring continued consistent production of the type approved products at the TA applicant's own premises and at other companies that are given the responsibility for manufacturing of the products.
- Review of the TA documentation and that this is still used as a basis for the production
- Review of possible changes to the design, the material and the performance of the product
- Verification of the product marking

This certificate is only valid if required periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in <https://approvalfinder.dnvgl.com>

END OF CERTIFICATE