DNV·GL

Certificate No:
TAP00000X4

TYPE EXAMINATION CERTIFICATE

This is to certify:

That the Gaskets and Sealings

with type designation(s)
NOVUS 10, NOVUS 30, NOVUS 31, NOVUS 34, NOVUS 49

Issued to
Flexitallic Limited
West Yorkshire, United Kingdom

is found to comply with
ASTM F152
ASTM F36

Application :

Type:	Temperature range:	Max. working press.:	Design:	Sizes:
NOVUS 10		**see manufacturer's**	**instructions**	
NOVUS 30		**see manufacturer's**	**instructions**	
NOVUS 31		**see manufacturer's**	**instructions**	
NOVUS 34		**see manufacturer's**	**instructions**	
NOVUS 49		**see manufacturer's**	**instructions**	

Issued at **Hamburg** on **2017-04-28**
This Certificate is valid until **2022-04-27**.
DNV GL local station: **Manchester**

Approval Engineer: **Guido Friederich**

for **DNV GL**

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 Examination Certificate and not to the approval of equipment/systems installed.

Product description

Novus gasket material is suitable for general technical process applications including hot and cold water, oils, fuels, gases and a wide range of general chemicals.

NOVUS 10

Technical data		Unit
Thickness range	0,4 to 6,0	mm
Colour	Black	
Tensile Strength (ASTM 152)	13	(MPa)
Compression (ASTM F 36)	11	(%)
Recovery (ASTM F36)	62	(%)
Density:	1,57	g/cm3
Residual stress at 175°C (BS 7531)	25	MPa
Gas leakage (BS 7531)	< 1,0	cm^3/min
Thickness increase (ASTM Oil 1)	1,0	%
Thickness increase (ASTM Fuel B)	2,5	%
Thickness increase (IRM 903 Oil)	2,5	%

NOVUS 30

Technical data		Unit
Thickness range	0,4 to 6,0	mm
Colour	Orange	
Tensile Strength (ASTM 152)	12	(MPa)
Compression (ASTM F 36)	9	(%)
Recovery (ASTM F36)	50	(%)
Density:	1,57	g/cm3
Residual stress at 300°C (BS 7531)	23	MPa
Gas leakage (BS 7531)	< 1,0	cm^3/min
Thickness increase (ASTM Oil 1)	2,0	%
Thickness increase (ASTM Fuel B)	4,0	%
Thickness increase (IRM 903 Oil)	5,0	%

NOVUS 31

Technical data		Unit
Thickness range	0,4 to 3,2	mm
Colour	Blue / Green	
Tensile Strength (ASTM 152)	8	(MPa)
Compression (ASTM F 36)	>6	(%)
Recovery (ASTM F36)	>50	(%)
Density:	2,0	g/cm3
Residual stress at 300°C (BS 7531)	15	MPa
Gas leakage (BS 7531)	< 1,0	cm^3/min
Thickness increase (ASTM Oil 1)	1,0	%
Thickness increase (ASTM Oil 3)	4,0	%
Thickness increase (ASTM Fuel B)	4,0	%

NOVUS 34

Technical data		Unit
Thickness range	0,25 to 6,0	mm
Colour	White	
Tensile Strength (ASTM 152)	15	(MPa)
Compression (ASTM F 36)	9	(%)

Recovery (ASTM F36)	55	(%)
Density:	1,75	g/cm3
Residual stress at 300°C (BS 7531)	26	MPa
Gas leakage (BS 7531)	< 1,0	cm^3/min
Thickness increase (ASTM Oil 1)	1,0	%
Thickness increase (ASTM Fuel B)	3,0	%
Thickness increase (IRM 903 Oil)	2,5	%

NOVUS 49

Technical data		Unit
Thickness range	0,4 to 6,0	mm
Colour	Black	
Tensile Strength (ASTM 152)	13	(MPa)
Compression (ASTM F 36)	11	(%)
Recovery (ASTM F36)	55	(%)
Density:	1,65	g/cm3
Residual stress at 300°C (BS 7531)	26	MPa
Gas leakage (BS 7531)	< 1,0	cm^3/min
Thickness increase (ASTM Oil 1)	1,0	%
Thickness increase (ASTM Fuel B)	2,5	%
Thickness increase (IRM 903 Oil)	2,5	%

Application/Limitation

The above listed compressed aramid gasket sheet types with nitrile rubber binder 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

- Maximum allowable working pressure and temperature according to the specification of the manufacturer.

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

Limitations and 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.
- Steam lines

Type Examination documentation

Marking of product

The flat gasket material NOVUS 10 / 30 / 31 / 34 / 49 shall be clearly marked with the following minimum signs:

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

Certificate Retention Survey

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

End of Certificate