Certificate no.:
TAP00002UC

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Gaskets and Sealings

with type designation(s)
QF3712- Non-Asbestos Sealing Sheet

issued to
Yantai Ishikawa Sealing Technology Co., Ltd.
Yantai, **China**

is found to comply with
ASTM F36:15(2021) Standard Test Method for Compressibility and Recovery of Gasket Materials
ASTM F152:95(2017) Standard Test Methods for Tension Testing of Nonmetallic Gasket Materials
ASTM F1315:17 Standard Test Method for Density of a Sheet Gasket Material
ASTM F37:06(2019) Standard Test Methods for Sealability of Gasket Materials

Application:

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

Temperature range:	**max. 250°C**
Max. working press.:	**10 MPa**
Design:	**-**
Sizes:	**see certificate**

Issued at **Hamburg** on **2024-05-13**
This Certificate is valid until **2029-05-12**.
DNV local unit: **Yantai NB & CMC**

for **DNV**

Approval Engineer: **Ana Cristina Do Carmo Insfran**

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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

Product description

Product type:

QF3712 Non-asbestos Sealing Sheet

Product composition:

The sheet is formed by calendering of the frame materials including aramid fiber and synthetic mineral fiber after special proportioning with oil-resistant rubber binders and adding other functional additives.

QF3712 Non-asbestos Sealing Sheet
Note[1]

Technical data	Standard	QF3712	Unit
Thickness range	-	0.3 to 3.0	mm
Leakage	ASTM F37-06	≤40	ml/(H·mm)
Density	ASTM F-1315	1.70 ± 0.15	g/cm^3
Compressibility	ASTM F36	10 ± 5	%
Recovery	ASTM F36	≥45	%
Transverse tensile strength	ASTM F152	≥10	MPa

Standard sizes: (L) × (W) (mm)
1290 × 1280
3840 × 1290
3840 × 2580

Continuous temperature: 200 °C

Application

QF3712 Non-asbestos Sealing Sheet type may be used under consideration of the mechanical and technical characteristics as well as physical and chemical properties for the following applications:

- Ships, oil drilling platforms, pressure vessels, engines, and other working conditions.
- For oil, general gas, water, water vapor and other media as sealing gasket materials.
- Special recommendation: used as sealing gasket for Marine equipment

Note[1]: The selection of the gaskets for the corresponding application and appropriate installation has to be in accordance with the instructions of the manufacturer.

Limitation

Pipelines 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: YANTAI ISHIKAWA
- Product type: QF3712

Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the Type Approval are complied with. Refer to DNV - CP-0338, Sec.4.

The 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.dnv.com

END OF CERTIFICATE