DNV·GL

Certificate No:
TAF00000ZN

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Thermal and sound insulation material with low flame-spread characteristics

with type designation(s)
AEROFLEX/AEROCEL and AEROFLEX-HF/AEROCEL-HF

Issued to
Aeroflex Co., Ltd.
Rayong, Thailand

is found to comply with
DNV GL offshore standards
DNV GL rules for classification – Ships
DNV GL statutory interpretations DNVGL-SI-0364 – SOLAS interpretations

Application :

Approved for use as insulation material of low flame-spread characteristics, not generating excessive quantities of smoke nor toxic products in fire. The material is not defined as non-combustible.

This certificate is recognized by Transport Canada.

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Issued at **Høvik** on **2018-07-06**
This Certificate is valid until **2023-07-05**.
DNV GL local station: **Bangkok**

Approval Engineer: **Marcin Tobiasz**

for **DNV GL**

Mårten Schei-Nilsson
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.

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Job Id: **262.1-009931-4**
Certificate No: **TAF00000ZN**

Product description
"Aeroflex/Aerocel and Aeroflex HF-Aerocel-HF"
composed of closed-cell flexible foam thermal insulation material made of rubber.
Density: 50-60 kg/m^3 (Aeroflex/Aerocel), 40-70 kg/m^3 (Aeroflex HF-Aerocel-HF). Thickness: 6-50 mm.

Application/Limitation
"Aeroflex/Aerocel and Aeroflex HF-Aerocel-HF" may be used on cold service pipework/fittings for refrigeration system everywhere onboard, and for pipework, fittings, air ducts and tanks insulation in cargo areas, mail rooms, baggage rooms and refrigerated compartments of service spaces, and exterior locations (SOLAS II-2/5.3.1.1). (Piping for hot and cold sanitary water can not be considered "cold service pipe work/fittings".)

Any adhesive used, other than the one used during testing, has to be tested for low flame spread characteristics according to IMO 2010 FTP Code part 5.

Maximum gross calorific value for Aeroflex/Aerocel (ref. SOLAS Chapter II-2 Reg. 5.3.2): 22.1 MJ/kg.
Maximum gross calorific value for Aeroflex HF-Aerocel-HF (ref. SOLAS Chapter II-2 Reg. 5.3.2): 20.4 MJ/kg.

Extent of application is to be considered and accepted for each case/project.

Each product is to be supplied with its manual for installation and use.

Type Approval documentation
Certification in accordance with Class Programme DNVGL-CP-0338, October 2017.

Test reports No. 886.4IMO080/09, 886.4IMO090/09, 886.4IMO100/09 for Aeroflex HF-Aerocel-HF, all dated 7 July 2009 from LAPI, Italy.

Test reports No. 885.4IMO080/09, 885.4IMO090/09, 885.4IMO100/09 for Aeroflex/Aerocel, all dated 7 July 2009 from LAPI, Italy.

Tests carried out
Tested according to IMO FTP Code Part 2 and 5 and in compliance with IMO 2010 FTP Code Ch. 8.

Marking of product
The product or packing is to be marked with name and address of manufacturer and type designation.

Transport Canada Approval
Based on the procedures laid down in the Transport Canada Publication entitled "Approval Procedures for, Life Saving Equipment and Structural Fire Protection Products (TP 14612)", DNV GL confirms that the product listed in this certificate is in accordance with Transport Canada's requirements.

Periodical assessment
DNV GL's surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described described in DNVGL-CP-0338 Section 4.