

TYPE APPROVAL CERTIFICATE

This is to certify:

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

with type designation(s)

PVC Single Sided Foam Seal

Issued to

SM Tech Co., Ltd.

Nam-gu Busan, Republic of Korea

is found to comply with

Det Norske Veritas' Interpretation of SOLAS 1974 Convention as Amended

Det Norske Veritas' Rules for Classification of Ships

Det Norske Veritas' Offshore Standards

Application :

Approved for use as insulation material of low flame spread characteristics. The product is not defined as non-combustible.

This certificate is recognized by Transport Canada.

This Certificate is valid until **2019-06-30**.

Issued at **Høvik** on **2015-08-03**

for **DNV GL**

DNV GL local station: **Pusan**

Approval Engineer: **Tessa Bieber**

Petter Langnes
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.

Job Id: **262.1-011926-3**
Certificate No: **TAF0000032**

Product description

"PVC Single Sided Foam Seal"

Consist of closed cell PVC foam with paper release liner on non-adhesive face.
Maximum thickness 5,0 mm.

Application/Limitation

The product may be used on cold service pipework/fittings for refrigeration systems 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 cannot be considered "cold service pipework/fittings".)

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

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 shall be documented separately where applicable, ref. SOLAS Chapter II-2 Reg. 5.3.2.

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

Type Approval documentation

Certification in accordance with Standard for Certification No. 1.2, Type Approval, January 2013.

Test reports No. 20010947 dated 10th October 2001 from Fire Insurers Laboratories of Korea.

Tests carried out

Tested according to IMO FTPC Parts 5 and in compliance with IMO 2010 FTP Code Ch. 8.

Marking of product

The product or packing is to be marked with name 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)*", Det Norske Veritas confirms that the product/s listed in this certificate is/are 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 in Standard for certification No. 1.2 Type Approval Item 4.