

TYPE APPROVAL CERTIFICATE**This is to certify:****That the Thermal and sound insulation material with low flame-spread characteristics**with type designation(s)
K-FLEX IN CLAD

Issued to

L'Isolante K-Flex S.p.A.
Roncello MB, Italy

is found to comply with

DNV GL statutory interpretations DNVGL-SI-0364 – SOLAS interpretations
DNV GL rules for classification – Ships
DNV GL offshore standards**Application :****Approved for use as combustibile insulation material with low flame-spread characteristics.****This certificate is recognized by Transport Canada.**Issued at **Høvik** on **2019-02-04**for **DNV GL**This Certificate is valid until **2020-12-31**.DNV GL local station: **Milan**Approval Engineer: **Helge Bjørnarå**

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.



Job Id: **262.1-012247-8**
Certificate No: **TAF000007S**
Revision No: **2**

Product description

"K-FLEX IN CLAD"

composed of 1 mm thick "K-FLEX IN CLAD Rubber foil" (polymeric based rubber with density of 1.8 g/cm³) glued to 25 mm "K-FLEX ST" insulation (elastomeric foam insulation nitrile rubber with density of 55±10 kg/m³) with 213A74D Scrim (Polyester Fibers, weave 4x1, density 4.4-4.7 g/m²)

Max. thickness: 26 mm

"K-FLEX IN CLAD Rubber foil" (1 mm, density 1.8 g/cm³) may be used without "K-FLEX ST".

The product is also manufactured at the following premises:

- L'Isolante K-Flex SRL, Roncello MB, Italy
- K-Flex USA, LCC, 100 Nomaco Dr Youngsville, NC, USA
- K-Flex Polska Sp. z o.o., Wielenin-Kolonia 50B, 99-210 Uniejów, Poland

Application/Limitation

Approved for use as combustibile insulation material with low flame-spread characteristics.

The combustibile insulation with low-flame spread characteristics may be used in cargo spaces, mail rooms, baggage rooms and refrigerated compartments of service spaces as well as for cold service pipework/fittings for refrigeration systems (SOLAS II-2/5.3.1.1). Piping for hot and cold sanitary water is not regarded as "cold service pipe work/fittings".

Approved colour (K-FLEX IN CLAD Rubber foil): Grey

Approved colour (K-FLEX ST): Black

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.

Each product is to be supplied with its manual for application, use and maintenance.

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, September 2018.

Test Report No. 361780 dated 2 March 2016 from Exova Warringtonfire, UK.

Test Report No. 0643\DC\REA\12_1 dated 5 November 2012 from CSI S.p.A, Italy.

Declaration No. 001/2016-DM/nf dated 11 March 2016 from the manufacturer.

Tests carried out


Tested in accordance with IMO 2010 FTP Code part 5.

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)", DNV GL confirms that the product listed in this certificate is in accordance with Transport Canada's requirements.



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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 DNVGL-CP-0338 Section 4.