



Certificate No:
TAF00001NN

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Class B Door

with type designation(s)
Class B-15 door, type ML

Issued to

Norac AS
Arendal, Norway

is found to comply with

DNV rules for classification – Ships

DNV offshore standards

DNV statutory interpretations DNV-SI-0364 – SOLAS interpretations, Edition July 2021

Application :

Approved for use as an integrated part of fire retarding division of class B-15.

This certificate is recognized by Transport Canada.

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

Issued at **Høvik** on **2022-04-27**

This Certificate is valid until **2027-04-26**.

for **DNV**

DNV local station: **West Norway CMC**

Approval Engineer: **Tessa Biever**

Helene David-Andersen
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.

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.



Form code: TA 251

Revision: 2021-03

www.dnv.com

Page 1 of 3

Product description

"N-ML door"

A single leaf hinged door composed of a 39 mm thick insulation core of type 'Superwool Plus Blanket' (manufactured by Morgan Thermal Ceramics with density 128 kg/m³) adhered to a 0.7 mm (alternatively 0.9 mm) thick galvanised steel sheet on both sides. Around the door leaf, a 0.9 mm thick U-profile made of galvanized steel is fitted.

Total thickness of door leaf: 39 mm (compressed insulation core).

The door leaf is equipped with a top panel with dimensions 1150 x 680 mm (W x H), which consists of two layers of a 25 mm thick Superwool Plus insulation (manufactured by Morgan Thermal Ceramics with density 128 kg/m³) adhered to a 0.9 mm thick galvanised steel sheet on exposed side and a 1.25 mm thick galvanised steel sheet on unexposed side.

Thickness of the top panel is 50 mm.

The door frame is made of 1.25 mm thick galvanised steel plates and fixed to the bulkhead by screws in size 3 x 32 mm with maximum distance 400 mm between screws. The frame is fitted with a threshold made of a 2 mm thick steel with 0.7 mm stainless steel cover, welded onto the door frame. The door leaf is attached to the door frame by three hinges.

The door may be optionally fitted with:

- In the upper part of the door leaf: Rectangular 15 mm thick glass window made from toughened glass with dimensions 416 x 615 mm (W x H), type 'Pyrostop 30-10' manufactured by Drag Industrier AS
- In the lower part of the door leaf: Ventilation louvre with an external size of 440 mm x 210 mm (W x H), manufactured by Skeisvoll & Co.;
- In the lower part of the door leaf: Kick-out panel with dimensions 538 mm x 538 mm (W x H);
- Drop down threshold of type Plantet FT manufactured by Planet GDZ AG;
- Lead cover of type EA 280 manufactured by Assa Abloy;

Alternatively, door have been tested with use of three-sided frame.

For further details, see the drawings mentioned under Type Approval documentation below.

Application/Limitation

Approved for use as an integrated part of fire retarding division of class B-15.

Max. clear opening of door leaf:	1000 mm x 2075 mm (W x H)
Max. size of door leaf:	1042 mm x 2090 mm (W x H)
Max. clear opening of glazing unit:	400 mm x 600 mm (W x H)
Max. clear opening of kick-out panel:	538 mm x 538 mm (W x H)
Max. size ventilation louvre:	440 mm x 210 mm (W x H)

A fire door of marginally larger dimensions than a fire-tested fire door may be individually assessed and accepted by Flag Administration (or Recognized Organization acting on its behalf) for a specific project with the same classification, provided documented compliance with IMO MSC.1/Circ. 1319.

Note that this is a fire safety certificate which only covers the fire technical properties (i.e., not to cover strength evaluations related to water tightness, weather tightness, etc.).

Any surface materials used have to be approved for smoke and toxicity and low flame spread characteristics (IMO 2010 FTP Code parts 2 and 5 or IMO FTPC Parts 2 and 5 when in compliance with the 2010 FTP Code Ch. 5.2 and 8) when required according to relevant rules and regulations.

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 installation, use and maintenance.

Type Approval documentation

Certification in accordance with DNV Class Program DNV-CP-0338, September 2021.

Test report No. 649-17TMU-IMO dated 04 May 2017, from TÜV Eesti OÜ, Maardu, Estonia.

Test report No. 749-18TMAU-IMO dated 14 December 2019, from TÜV Eesti OÜ, Maardu, Estonia.

Test report No. 794-19TMU-IMO dated 27 August 2019, from TÜV Eesti OÜ, Maardu, Estonia.

Test report No. 704-17TMAU-IMO dated 22 February 2018, from TÜV Eesti OÜ, Maardu, Estonia.



Job Id: **262.1-036607-1**
Certificate No: **TAF00001NN**

Drawing No. 1200-246-0 dated 06 December 2016 from manufacturer.
Drawing No. 1200-253-0 dated 13 November 2017 from manufacturer.
Drawing No. 1210-266-0 dated 30 May 2018 from manufacturer.
Drawing No. 1210-274-0 dated 12 February 2019 from manufacturer.

Tests carried out

Tested according to IMO 2010 FTP Code part 3.

The door has been successfully tested with extended test period (36 minutes for the insulation criterion and 36 minutes for the integrity criterion), in compliance with IMO MSC.1/Circ. 1319.

Marking of product

The product is to be marked with name of manufacturer, type designation and fire technical rating.

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 confirms that the product listed in this certificate is in accordance with Transport Canada's requirements.

Periodical assessment

DNV 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 Class Programme DNV-CP-0338, Section 4.