



Certificate No:
TAF00001NM

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Class B Door

with type designation(s)

B-15 double door with top panel - type N-MLDD

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 Bieber**

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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

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Product description

“B-15 double door with top panel - type N-MLDD”

Is a double leaf hinged door composed of an active and passive door leaf. Each door leaf is constructed of a core of 39 mm thick insulation material of type ‘Superwool Plus Blanket’ (manufactured by Morgan Thermal Ceramics with a density 128 kg/m³) adhered to 0.9 mm thick galvanised steel sheet on both sides. Both door leaves are reinforced vertically by two stiffeners with dimensions 15 x 37 x 15 mm made of 0.9 mm thick galvanized steel (spacing 280 mm from edge).

Around the door leaf, a 15 x 50 x 15 U-profile made of 0.9 mm thick galvanized steel is fitted by pop-rivets (3.2 x 10 mm) spaced 300 or 400 mm. Each door leaf is attached to the door frame by three hinges. The active and passive door leaf is fitted with a door lock with or without handle/panic bar.

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

The door is equipped with a top panel with dimensions 1646 mm x 380 mm (W x H). and is constructed of a core of two layers of a 25 mm thick ‘Superwool Plus’ insulation (manufactured by Morgan Thermal Ceramics with a density 128 kg/m³). A 0.9 mm thick galvanised steel sheet on is adhered to the exposed side and a 1.25 mm thick galvanised steel sheet is adhered on the 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. Frame profile is filled with Promatech H (manufactured by Promat d.o.o. with a density of 870 kg/m³) 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 active and passive door leave may be fitted with:

- In the upper part of the door leaf: Rectangular 15 mm thick glass window made from toughened glass with dimensions 415 mm 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 of max. size 200 cm², 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)

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. size of clear door opening:	1600 mm x 2075 mm (W x H)
Max. size of passive door leaf:	798 mm x 2091 mm (W x H)
Max. size of active door leaf:	839 mm x 2091 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 of ventilation louvre:	200 cm ²

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. 732-18T2MU-IMO dated 19 June 2018 from TÜV Eesti OÜ, Maardu, Estonia.

Test report No. 749-18TMAU-IMO dated 14 December 2018 from TÜV Eesti OÜ, Maardu, Estonia

Test report No. 813-19T2MU-MO dated 3 April 2020 from TÜV Eesti OÜ, Maardu, Estonia.

Drawing No. 1210-264-0 dated 03 April 2018 from manufacturer.

Drawing No. 1210-266-0 dated 30 May 2018 from manufacturer.

Drawing No. 1210-334-0 dated 03 April 2018 from manufacturer.

Drawing No. 1210-281-0 dated 11 June 2019 from manufacturer.

Statement 006-21 dated 2021-02-25 from TÜV Eesti OÜ, Maardu, Estonia.

Tests carried out

Tested according to IMO 2010 FTP Code part 3.

The door has been successfully tested with extended test period (18 minutes for the insulation criteria and 36 minutes for the integrity criteria), in accordance 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.