

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00003T5
Revision No:
3

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV AS under the authority of the Government of Norway.

This is to certify:

That the Non-combustible materials

with type designation(s)
Non-combustible materials

Issued to

KNAUF INSULATION d.o.o.
Novi Marof, Varaždinska, Croatia

is found to comply with the requirements in the following Regulations/Standards:

Regulation (EU) 2022/1157,
item No. MED/3.13. SOLAS 74 as amended, Regulation II-2/3 II-2/5, II-2/9 & X/3, 2000 HSC Code 7 and IMO
2010 FTP Code

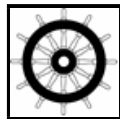
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2028-06-19**.

Issued at **Høvik** on **2023-06-20**

DNV local unit:
Rijeka

Approval Engineer:
Karolina Kusmider



Notified Body
No.: **0575**



for **DNV AS**

Digitally Signed By:
Øyvind Hoff
Location: DNV Høvik, Norway
on behalf of

Sverre Olav Bergli
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005, and amended by Decision No 1/2019 dated February 22nd, 2019.



The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

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.



Product description

Mineral wool insulation materials bonded with phenol formaldehyde resin or with ECOSE / E-Technology (carbohydrate) binder.

| Products names ²⁾ : | Nominal Density [kg/m ³]: | Organic content ¹⁾ : | | Description: |
|--|---------------------------------------|---------------------------------|----------------------|--|
| | | PF resin | ECOSE (E-Technology) | |
| FM 070 FM 080 FM 100 FM 120 | 70 - 120 | ≤ 3% | ≤ 3% | Felt mats |
| FM 620 FM 640 FM 660 FM 680 | 70 - 120 | ≤ 3% | ≤ 3% | Felt mats |
| CR STD | 40 - 400 | < 1% | < 1% | Cords (ropes) |
| WM 620 GGN WM 640 GGN WM 660 GGN WM 680 GGN | 65 - 120 | ≤ 3% | ≤ 3% | Wired mats reinforced with galvanised knittings and trimmed with galvanised steel wire |
| WM 070 GGN WM 080 GGN WM 100 GGN WM 120 GGN | 65 - 120 | ≤ 3% | ≤ 3% | Wired mats reinforced with galvanised knittings and trimmed with galvanised steel wire |
| PS 680 PS Eco | 90 - 160 | ≤ 4% | ≤ 4% | Wound pipe section |
| LM Eco ALU LM Pro ALU LM 450 ALU LM 550 ALU LM 700 ALU | 40 – 95 | - | ≤ 4% | Lamella felt mat |
| PS Eco ALU PS Pro ALU | 80 – 130 | - | ≤ 4% | Wound pipe section (aluminium coated) |
| BD 035 ALU BD 040 ALU BD 050 ALU BD 060 ALU BD 070 ALU BD 080 ALU BD 090 ALU BD 100 ALU BD 110 ALU BD 120 ALU BD 130 ALU | 35 – 130 | - | ≤ 4% | Fire protection boards (aluminium coated) |
| BD 035 BD 040 BD 050 BD 060 BD 070 BD 080 BD 090 BD 100 BD 110 BD 120 BD 130 BD 140 BD 150 BD 160 BD 170 BD 180 BD 190 BD 200 | 35 – 200 | ≤ 3% | ≤ 3% | Fire protection boards |

| | | | | |
|--|----------|------|------|------------------------|
| BD 450 BD 550 BD 620 BD 640 BD 650 BD 660 BD 670 BD 680 BD 700 | 50 – 150 | ≤ 3% | ≤ 3% | Fire protection boards |
| General note: 1) All Knauf Insulation products can be produced with Phenol Formaldehyde resin binder or with a binder based on ECOSE or E-Technology. If ECOSE or E-Technology is applied all product names can get ECOSE or E-Technology appendix. 2) All product names have always one of the following prefixes: Sea-teK, Power-teK, Thermo-teK, Fire-teK, Sound-teK. | | | | |

Application/Limitation

Approved for use as non-combustible materials.

The product may be used as an integrated part of approved fire resisting divisions only when tested as such.

Insulation material with surface layer have to be approved for low flame spread characteristics (test for surface flammability) according to the Marine Equipment Directive and bear the Mark of Conformity.

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

Type Examination documentation

Test report No. 3271/10-1 dated 24 February 2010 (Tervol TDM-120 = WM 680 GG) from LTM Zagreb, Croatia,

Test reports No.:

- P0884/15-530-4 dated 16 May 2017 (KI RMW 30 kg/m³; PF binder = BD 035)
- P0884/15-530-3 dated 16 May 2017 (KI RMW 200 kg/m³; PF binder = BD 200)
- P877/15-530-2 dated 27 August 2015 (KI RMW 30 kg/m³; ECOSE binder = BD 035)
- P877/15-530-1 dated 25 September 2015 (KI RMW 200 kg/m³; ECOSE binder = BD 200)
- P 1342/11-530-1 dated 20 December 2011 (IPS 620),
- 147/23-530-1-EN dated 27 March 2023 (WM 620 GGN / WM 070 GGN)
- 147/23-530-2-EN dated 27 March 2023 (WM 680 GGN / WM 120 GGN)

all from ZAG Ljubljana, Slovenia.

Test reports No.:

- P 0151/12-530-1 dated 17 February 2012 (Tervol Z = CR STD),
- P 0228/11-530-4 dated 11 May 2011 (MHTB 700 = BD 150),
- P 0228/11-530-6 dated 11 May 2011 (MHTB 450 = BD 050),
- Summary of test reports No. 530/NOK/3 dated 14 January 2016,

all from ZAG Ljubljana, Slovenia.

Test reports No.:

- NN 10/6985.1 (Heralan HTB 550 = BD 060), dated 15 August 2011,
- NN 10/6985.2 (Heralan HTB D200 = BD 200), dated 15 August 2011,

all from DMT GmbH & Co. KG, Dortmund, Germany.

Test reports No.:

- P1709039 – Document DE/1 dated 21 March 2018 (LM/PS/BD+ALU: 40 kg/m³),
- P1709039 – Document DE/2 dated 21 March 2018 (LM/PS/BD+ALU: 130 kg/m³),

all from LNE Laboratoire De Trappes, France.

Tests carried out

Tested according to IMO FTP Code Part 1 and in compliance with IMO 2010 FTP Code Ch. 8 and according to IMO 2010 FTP Code Part 1.

Marking of product

The product or packing is to be marked with name and address of manufacturer, type designation, fire-technical rating, Mark of Conformity and USCG approval number if applicable (see first page).