

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB000083D

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the Non-combustible materials

with type designation(s)
KAETEC Insulation System

Issued to

KAEFER Schiffsausbau GmbH
Bremen, Germany

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

Regulation (EU) 2021/1158,
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

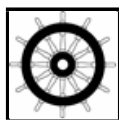
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2027-06-28**.

Issued at **Hamburg** on **2022-06-29**

DNV local station:
Hamburg – CMC North/East

Approval Engineer:
Timo Linn



Notified Body
No.: **0098**

for **DNV SE**

Christine Mydlak-Roeder
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) 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 SE 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

KAETEC INSULATION SYSTEM is composed of a non-combustible insulation material core of FireMaster Marine Plus Blanket and encased with non-combustible glass cloth fabric. This outer canvas is optional made of material types with Thermo-E-Glass Fabric TG650-TG1250 and/or Rex Thermoglas fabric. Both optional glass cloth fabric materials can be equipped with a silicone coating or stainless steel wire mesh (V4A), whereas the silicon coating is towards the ambient side and the stainless steel wire towards the device (high temperature) side.

Thermo-E-Glass Fabric TG650-TG1250
Nominal weight: 650g/m² up to 1250 g/m²
Organic Content: < 1%

Rex Thermoglas Fabric
Nominal weight: 200 -1300 g/m²
Nominal thickness: 0.2 mm to 1.5 mm
Organic content: max. 3%

FireMaster Marine Plus Blanket
Thickness range: 6 - 65 mm
Density range: 44 - 128 kg/m³
Nominal organic content: 1%

Silicone coating
Quantity of application per side: max. 500 g/m²
Organic contents (total): max. 2 %

Application/Limitation

Approved for use as non-combustible material.

The used materials have to be type approved according to the Marine Equipment Directive and bear the Mark of Conformity.

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.

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

Type Examination documentation

Thermo-E-Glass Fabric
MEDB Certification no.114.575, dated on 08.11.2017 and issued by BG Verkehr, 20457 Hamburg, Germany

Rex Thermoglas Fabric
MEDB Certification no.114.575, dated on 08.11.2017 and issued by BG Verkehr, 20457 Hamburg, Germany

FireMaster Marine Plus Blanket
MEDB Certification no. MEDB000017R Rev.1, dated on 22.08.2021 and issued by DNV, Høvik, Norway.

Surface Material Silicone coating
MEDB Certification no.118118-03, dated on 29.03.2019 and issued by BG Verkehr, 20457 Hamburg, Germany.

KAEFER data sheet KAETEC INSULATION SYSTEM Rev.1 dated on 03/2022.

Tests carried out

Tested according to IMO FTP Code Part 1 and Part 5 and Annex 2 item 2.2; and in compliance with IMO 2010 FTP Code Ch. 8.

Marking of product

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