DNV·GL

Certificate No:
MEDB00001GZ

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

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 GL AS under the authority of the Government of the Kingdom of Norway.

This is to certify:

That the Concentrate for fixed high expansion foam fire extinguishing systems for machinery spaces and cargo pump rooms

with type designation(s)
SKUM HOTFOAM

Issued to
SABO FOAM S.r.l.
Cologno al Serio BG, Italy

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2015/559,**
Annex A.1, item No. A.1/3.47 and Annex B, Module B in the Directive; SOLAS 74 as amended Regulation II-2/10, IMO MSC.1/Circ.1239 and FSS Code 6

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

This Certificate is valid until **2019-07-10**.

Issued at **Høvik** on **2016-10-19**

DNV GL local station:
Milan

Approval Engineer:
Synnøve Bolstad Eri

Notified Body
No.: **0575**

for **DNV GL AS**

Vidar Dolonen
Head of Notified Body

Product description
"SKUM HOTFOAM"
A synthetic high expansion foam concentrate.

Application/Limitation
Approved for use as high expansion foam concentrate in fixed and mobile fire extinguishing systems.

The foam concentrate is approved for use against hydrocarbon fires (non-polar solvents).

Description	**SKUM HOTFOAM**
Nominal mixing ratio with seawater:	2 %
Minimum usage temperature:	-2 °C
Maximum usage/storage temperature:	+50 °C
Expansion ratio:	1:846 *
*) Data from initial fire test, when tested with seawater and IMO MSC/Circ.670 test apparatus.	
Foam use, filling, maintenance, storage, transport, etc. are to be in accordance with the manufacturer's instructions.	

General conditions:
This approval does not address the foam generating equipment, only the foam concentrate.

The validity of the certificate is dependent on the compliance of each manufactured product with the prototype which underwent the type approval tests and such compliance shall be stated by the manufacturer.

The fixed high expansion foam fire extinguishing system for machinery spaces and cargo pump rooms must be tested with the approved concentrate to the satisfaction of the Administration.

The storage facilities and piping arrangement onboard the vessel are to be designed and constructed with regard to seawater exposure (where applicable), and the minimum allowed temperature for the foam liquid.

Storage of the fire extinguishing media to be in compliance with IMO MSC/Circ. 1239 (SOLAS II-2/10.4.3).

Each product is to be supplied with its manual for installation, use and maintenance. This shall include requirements for transport and storage, material of foam tank, coating (if applicable) and cleaning procedures.

Periodical controls of foam concentrates stored on board
The foam liquid is to be delivered with a declaration of the main characteristics (sedimentation, pH-value, expansion ratio, drainage time, volumetric mass and date of production). The declaration will be the basis for the annual condition test (each year after 3 years).

Type Examination documentation
Test report No. 3P07567-3 dated 10 February 2014 from SP Technical Research Institute of Sweden, Borås, Sweden.

Tests carried out
Tested according to IMO MSC/Circ.670.

Marking of product
The packing is to be marked with name and address of supplier, type designation, storage/use temperature, production date and the MED Mark of Conformity (see page 1).