



Certificate no.:
TAF00001ZU

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Protective Clothing

with type designation(s)

Chemical Protective Clothing Type : RFH-1

issued to

Shanghai Martian Ship Equipment Co., Ltd.
Shanghai, China

is found to comply with

DNV offshore standards

DNV rules for classification – Ships

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

Application:

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.
EN 14605:2005 TYPE 4.

Issued at **Høvik** on **2025-03-17**

This Certificate is valid until **2030-03-16**.

for **DNV**

DNV local unit: **Shanghai**

Approval Engineer: **Timo Linn**

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 USD 300 000.

Product description

The Chemical Protective Suit "Type : RFH-1" is a chemical protective clothing classed as a Type 4 (spray tight) consisting of a full-body coverall with attached elastic hood.

It is resistant against various chemicals which are listed under Application Limitation.

The protective clothing shall be worn in combination with additional protective equipment such as approved gloves, safety boots, safety helmet or respirators which are not integral to this product.

Overall weight: 3.5 +/- 0.5 kg
Zipper: Not gas-proofed
Seams: Linking seams with overlapping button blacket
Colour: red
Material: 0.3 mm PVC
Size: M= 164-176cm , L= 176-188cm, XL= 188-200

For further details refer to the documentation listed below under "Type Examination documentation".

Application/Limitation

Approved as chemical protective clothing of Type 4.

As required by SOLAS 1974 as amended, Ch. II-2 Reg.19.3.6.1 and IMO IBC Code, Ch.14.1.1.

Report No.	EN 14605:2005+A1:2009 (Type 4):
Abrasion Resistance	Class 6
Compression-Folding (Schildknecht) Flex Cracking Resistance	Class 6
Compression-Folding (Schildknecht) Flex Cracking Resistance at -30°C	Class 6
Trapezoidal Tear Resistance	Class 3
Tensile Strength	Class 5
Puncture Resistance	Class 3
Resistance to Permeation by Chemicals for Materials (Fabric, 10%NaOH)	Class 6
Resistance to Permeation by Chemicals for Materials (Fabric, 30%H2SO4)	Class 6
Resistance to Permeation by Chemicals for Materials (Fabric, 37%HCl)	Class 6
Resistance to Permeation by Chemicals for Materials (A-1, 10%NaOH)	Class 6
Resistance to Permeation by Chemicals for Materials (A-1, 30%H2SO4)	Class 6
Resistance to Permeation by Chemicals for Materials (A-1, 37%HCl)	Class 6
Resistance to Permeation by Chemicals for Materials (A-2, 10%NaOH)	Class 6
Resistance to Permeation by Chemicals for Materials (A-2, 30%H2SO4)	Class 6
Resistance to Permeation by Chemicals for Materials (A-2, 37%HCl)	Class 6
Resistance to Ignition	Pass
Seam Strength	Class 5
Whole Suits Testing	Pass

Remark: Pass = Meet Relative Standard Requirement

The applicant's instructions for use, storage, transport, maintenance and the applicant's recommendations and restrictions for use are to be complied with.

Type Approval documentation

Test report no.: SL52425343188001TX dated 29 October 2024 issued by SGS-CSTC Standards Technical Services (Shanghai).

Technical Drawing No: RFH-I-00-01, RFH-I-00-01, RFH-I-01 to RFH-I-08
Material list: RFH-I

Tests carried out



Job ID: **262.1-042809-1**
Certificate no.: **TAF00001ZU**

EN 14605:2005 TYPE 4.

Marking of product

The markings are to be in accordance with EN 14605:2005 + A1:2009 para 5.

The product or its packing shall as a minimum be marked with the company's name and address, trademark and the same type designations as given in the TA certificate for traceability. The marking shall be permanent and unique.

Periodical assessment

DNV's 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 Program DNV-CP-0338, Section 4.