



Certificate No:
TAK000024H

TYPE APPROVAL CERTIFICATE

This is to certify:

That the TBT-Free Anti-Fouling Systems

with type designation(s)

FASTAR I, FASTAR II, FASTAR XI and FASTAR XII

Issued to

Nippon Paint Marine (Singapore) Pte Ltd
Singapore, Singapore

is found to comply with

DNV class programme DNV-CP-0110 – Type approval – Anti-fouling systems

Application :

Organotin-free self-polishing type anti-fouling system.

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Issued at **Høvik** on **2022-05-12**

This Certificate is valid until **2027-05-11**.

DNV local station: **Singapore**

for **DNV**

Approval Engineer: **Gisle Hersvik**

Gustav Heiberg
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

Revision: 2021-03

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Product description

Organotin-free self-polishing type anti-fouling paint; **FASTAR I, FASTAR II, FASTAR XI and FASTAR XII**

Colours:

The product may be available in various colours. Please contact the local Nippon Paint Marine (Singapore) Pte Ltd representative for details.

Active ingredients:

CAS No. 1317-39-1	Dicopper Oxide
CAS No. 14915-37-8	Bis(1-hydroxy-1H-pyridine-2-thionato-O,S)copper

Application/Limitation

The issuance of this certificate is solely connected to the control of the Anti-Fouling System, AFS, with regard to compliance with the International Convention on the Control of Harmful Anti-Fouling Systems on Ships.

It does not cover verification of surface preparation, corrosion protection, fire, health and safety precautions, durability of the AFS or environmental properties other than regulated by the Convention.

Any significant changes in design and / or quality of the material will render the approval invalid.

Type Approval documentation

Tests carried out

Type Testing carried out in accordance with **Type Approval documentation**, with the following test results, ref. Test Report from Vietnam Government IET of 2022-04-08:

- | | |
|----------------------------------|-------------|
| - FASTAR I (Dark Brown): | 0,0034% tin |
| - FASTAR II (Dark Brown): | 0,0043% tin |
| - FASTAR XI (Red Brown): | 0,0037% tin |
| - FASTAR XII (Red Brown): | 0,0054% tin |

Marking of product

Product shall be marked with *manufacturer's name and address*; **Nippon Paint Marine (Singapore) Pte Ltd.** and *type designation*.

The marking is to be carried out in such a way that it is visible, legible and indelible. The marking of product is to enable traceability to the DNV Type Approval Certificate.

Periodical assessment

The scope of the Periodical Assessment is to verify that the conditions stipulated for the Type Approval is complied with and that no alterations are made to the product design or choice of materials.

Periodical assessments (for Certificate Retention / Certificate Renewal) shall be performed according to DNV-CP-0338.

This certificate is only valid if required Periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>

END OF CERTIFICATE