

TYPE APPROVAL CERTIFICATE

This is to certify:**That the TBT-Free Anti-Fouling Systems**

with type designation(s)

FASTAR I, FASTAR II, FASTAR XI, FASTAR XII, ECOLOFLEX SPC 150 HyB Premium

Issued to

**Nippon Paint Marine Coatings Co., Ltd.
Osaka-city, Osaka, Japan**

is found to comply with

DNV GL class programme DNVGL-CP-0110 – Type approval – Anti-fouling systems**Application :****Organo-tin free anti-fouling system.****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Høvik** on **2020-08-31**This Certificate is valid until **2025-08-30**.for **DNV GL**DNV GL local station: **Kobe**Approval Engineer: **Stefan Marion**

**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 GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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.



Job Id: **262.1-034239-1**
Certificate No: **TAK00001XN**

Product description

Organo-tin free hydrolysing type anti-fouling paints;
- **FASTAR I, FASTAR II, FASTAR XI, FASTAR XII**
- **ECOLOFLEX SPC 150 HyB Premium**

Colours:

The product may be available in various colours. Please contact the local Nippon Paint Marine Coatings representative for details.

Active Ingredients:

CAS No. 1317-39-1	Cuprous Oxide
CAS No. 14915-37-8	Copper Pyrithione

Manufactured by

Nippon Paint Co., Ltd. Okayama Plant, 33-1 Taiheidai, Shohoh-cho, Katsuta-gun, Okayama, Japan
DNV GL local station: Kobe

Responsibility

The Company (stated on the front page of this Certificate) takes the responsibility that both design and production are in compliance with Rules, Standards and/or Regulations listed on page 1 of this certificate.

Nippon Paint Co., Ltd. Okayama Plant has a written toll manufacturing agreement with **Nippon Paint Marine Coatings Co., Ltd.** (the Company).

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.

Type Approval documentation

Tests carried out

Type Testing carried out in accordance with **Type Approval documentation**, with the following test result, ref. Test Report from FITI of 2020-07-20:

- FASTAR I	0.0013 % tin (no TBT-compounds detected)
- FASTAR II	0.0017 % tin (no TBT-compounds detected)
- FASTAR XI	0.0026 % tin (no TBT-compounds detected)
- FASTAR XII	0.0033 % tin (no TBT-compounds detected)
- ECOLOFLEX SPC 150 HyB Premium	0.0026 % tin (no TBT-compounds detected)

Marking of product

Product shall be marked with *manufacturer's name*; **Nippon Paint Marine Coatings Co. Ltd, Osaka, Japan**, and *type designation*; **FASTAR I, FASTAR II, FASTAR XI, FASTAR XII, ECOLOFLEX SPC 150 HyB Premium**, and *date of production/batch number*.



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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 GL 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 and Certificate Renewal) shall be performed according to DNVGL-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.dnvgl.com>

END OF CERTIFICATE