

TYPE APPROVAL CERTIFICATE

This is to certify:**That the TBT-Free Anti-Fouling Systems**with type designation(s)
WILCKENS AF 2000

Issued to

Wilckens Paints Factory S.A.
Koropi, Greece

is found to comply with

DNV GL class programme DNVGL-CP-0110 – Type approval – Anti-fouling systems**Application :****Organotin-free self-polishing anti-fouling.****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Høvik** on **2018-04-26**This Certificate is valid until **2023-04-25**.for **DNV GL**DNV GL local station: **Piraeus**Approval Engineer: **Gisle Hersvik**

Rikard Törnqvist
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.



Product description

Organotin-free self-polishing anti-fouling paint; **WILCKENS AF 2000**

Colours:

Black, White, Red Brown, Brown, Blue

The product may be available in other colours. Please contact the local Wilckens representative for details.

Active ingredients:

Cuprous oxide	CAS No. 1317-39-1
Zinc pyrithione	CAS No. 13463-41-7
4,5-Dichloro-2-n-Octyl-4-isothiazolin-3-one (DICOIT)	CAS No. 64359-81-5
2-octyl-2H-isothiazol-3-one	CAS No. 26530-20-1

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.

Type Approval documentation

Tests carried out

Type Testing carried out in accordance with **Type Approval documentation**, with the following test result, ref. Report of Analysis from University of Athens Department of Chemistry of 2018-03-19:

- **WILCKENS AF 2000:** <0.000005 % tin (<50 µg/kg)

Marking of product

Product shall be marked with *manufacturer's name*; **Wilckens Paints Factory S.A., Greece** and *type designation*; **WILCKENS AF 2000**.

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 Assessment to be performed after 2 and 3.5 years (Certificate Retention) and at renewal after 5 years (Certificate Renewal).

The main elements of the Periodical Assessment are to:

- Ensure that **Type Approval documentation** is available.
- Review design, materials, production process, and performance with respect to possible changes, in order to ensure compliance with **Type Approval documentation** and/or referenced material specifications.
- Ensure traceability between manufacturer's product marking and DNV GL Type Approval Certificate.

END OF CERTIFICATE