

TYPE APPROVAL CERTIFICATE

This is to certify:

that the **Protective Coating Systems - Seawater Ballast Tanks**

with type designation(s)
Tenaxon T 570 H

issued to

TMP Tenax Marine Paints Vertriebs GmbH
Sachsenring 1, 27711 Osterholz-Scharmbeck, Germany

is found to comply with

DNV rules for classification – Ships
DNV class programme DNV-CP-0108 – Type approval – Protective coating systems for seawater ballast tanks and double-side skin spaces
IMO Resolution MSC.215(82) Performance Standard for Protective Coatings (PSPC)
IACS Unified Interpretations SC223. For Application of SOLAS Regulation II-1/3-2 Performance Standard for Protective Coatings (PSPC) for Dedicated Seawater Ballast Tanks in All Types of Ships and Double-side Skin Spaces of Bulk Carriers.

Application:

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

Issued at **Hamburg** on **2024-03-06**

This Certificate is valid until **2029-03-05**.

DNV local unit: **Hamburg – CMC North/East**

Approval Engineer: **Enno Brück**



for **DNV**

This document has been digitally signed and will
therefore not have handwritten signature
Christian Wildhagen

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.



Product description

TENAXON T570 H, two component, solvent free epoxy/hydrocarbon resin

Manufactured by

BERGOLIN GmbH & Co.KG, P.O. Box 1361, 27703 Osterholz-Scharmbeck

DNV local station: Hamburg

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.

Application/Limitation

This approval is solely connected to the corrosion prevention properties of the coating material. The approval does not include any evaluation of toxicity, contamination, pollution, or fire technical properties.

TENAXON T570 H is approved for application on blast cleaned surfaces and on prequalified shop primed surfaces. The following shop primers have been prequalified:

- HEMPEL's SHOPPRIMER ZS 15890 [Hempel A/S]
- SigmaWeld 199 [PPG Protective & Marine Coatings]

Surface preparation and coating application as per PSPC or manufacturer's recommendations, whichever is stricter.

The durability of the applied coating system will depend on the steel surface preparation, coating application and the environmental conditions.

The Type Approval Certificate is invalid if the formulation of the epoxy coating **TENAXON T570 H** is changed to a degree deemed significant by DNV. If the formulation of any of the listed pre-qualified shop primers is changed to a degree deemed significant by DNV that shop primer cannot be used as part of the Protective Coating System.

Tests carried out

- Inspection Report No. 12-015822, prepared by Germanischer Lloyd SE Hamburg, dated 2012-03-22.

The coating system is approved with the following limitations:

- the coating system is only to be used in ballast tanks of less than 330 m³ in capacity
- the coating system is not to be used in ballast tanks adjacent to a heated tank, and
- the coating system is not to be used under deck exposed to the sun.

The Type Approval for the coating system is based on 5 years field exposure according to IACS and IACS UI SC 223. The inspections and conclusions reported in the GL Report are carried out according to the procedures in IMO Resolution MSC.215(82) Performance Standard for Protective Coatings.

Marking of product

Product/package shall be marked with *manufacturer's name and address*; **TMP Tenax Marine Paints Vertriebs GmbH, Germany** and *type designation*; **TENAXON T570 H**, and *date of production/batch number*.

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 Assessment (Certificate Retention) and renewal after 5 years (Certificate Renewal) shall be performed acc. DNV CP-0338.

END OF CERTIFICATE