Certificate No:
TAK0000220

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Protective Coating Systems - Seawater Ballast Tanks

with type designation(s)
EPICON ZINC RICH PRIMER B-2 + CMP NOVA 2000
EPICON ZINC RICH PRIMER B-2 + CMP NOVA 2000 QD

Issued to
Chugoku Marine Paints, Ltd. (Hiroshima Head Office)
Otake, Hiroshima Pref., Japan

is found to comply with
DNV GL class programme DNVGL-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 **2021-09-02**
This Certificate is valid until **2026-09-01**.
DNV local station: **Kobe**

Approval Engineer: **Enno Brück**

for **DNV**

Thorsten Lohmann
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.

Product description

EPICON ZINC RICH PRIMER B-2 + CMP NOVA 2000 and EPICON ZINC RICH PRIMER B-2 + CMP NOVA 2000 QD are high-build anti-corrosive paints, based on a combination of metallic zinc, epoxy resin and hardener.

Manufactured by

Kobe Paints, Ltd., 1321-1, Rokubuichi Aza Hyakuchobu, Inami-cho, Kako-gun, Hyogo, Japan.

DNV local office: Kobe

Responsibility

The holder of 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.

EPICON ZINC RICH PRIMER B-2 + CMP NOVA 2000 / EPICON ZINC RICH PRIMER B-2 + CMP NOVA 2000 QD are approved for application on blast cleaned surfaces and on prequalified shop primed surfaces. The following shop primers have been prequalified:

- CERABOND 2000 [Chugoku Marine Paints, Ltd.]
- CERAZINC [Kobe Paints, Ltd.]
- NIPPE CERAMO [Nippon Paint Marine Coatings Co., Ltd.]
- SD ZINC 1000HA(S) [Kansai Paint Marine Co., Ltd.]
- CMP CERAZEUS [Chugoku Marine Paints, Ltd.]

Surface preparation and coating application according to 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 **EPICON ZINC RICH PRIMER B-2 + CMP NOVA 2000 / EPICON ZINC RICH PRIMER B-2 + CMP NOVA 2000 QD** is changed to a degree deemed significant by DNV. If the formulation of the listed pre-qualified shop primer is changed to a degree deemed significant by DNV the shop primer cannot be used as part of the Protective Coating System.

Tests carried out

Type Testing carried out in accordance with DNV GL CP-0108. The tests are carried out according to the procedures in IMO Resolution MSC.215(82) Performance Standard for Protective Coatings (PSPC), ref. IACS UI SC223:

- Japan Paint Inspection and testing Association Report No.: 180750, "Ballast Tank Coating Test of EPICON ZINC RICH PRIMER B-2 + CMP NOVA 2000 on CERABOND 2000 Shop Primer", dated 2019-07-10.
- Japan Paint Inspection and testing Association Report No.: 180751, "Ballast Tank Coating Test of EPICON ZINC RICH PRIMER B-2 + CMP NOVA 2000 QD on CERABOND 2000 Shop Primer", dated 2019-07-10.
- CERAZINC same tests as for CERABOND 2000, see confirmation letter
- Japan Paint Inspection and testing Association Report No.: 180754, "Ballast Tank Coating Test of 2x160µm EPICON ZINC RICH PRIMER B-2 + CMP NOVA 2000 on NIPPON CERAMO Shop Primer", dated 2019-07-10.
- Japan Paint Inspection and testing Association Report No.: 180755, "Ballast Tank Coating Test of 2x160µm EPICON ZINC RICH PRIMER B-2 + CMP NOVA 2000 QD on NIPPON CERAMO Shop Primer", dated 2019-07-10.
- Japan Paint Inspection and testing Association Report No.: 180758, "Ballast Tank Coating Test of 2x160µm EPICON ZINC RICH PRIMER B-2 + CMP NOVA 2000 on SD ZINC 1000HA(S) Shop Primer", dated 2019-07-10.
- Japan Paint Inspection and testing Association Report No.: 180759, "Ballast Tank Coating Test of 2x160µm EPICON ZINC RICH PRIMER B-2 + CMP NOVA 2000 QD on SD ZINC 1000HA(S) Shop Primer", dated 2019-07-10.
- DNV GL AS Oil & Gas Report No. 2020-5031 Rev. 00, "Crossover coating test of two coats CMP NOVA 2000 and one coat EPICON ZINC RICH PRIMER B-2 on CMP CERAZEUS", dated 2020-09-17.

- DNV GL AS Oil & Gas Report No. 2020-5032 Rev. 00, “Crossover coating test of two coats CMP NOVA 2000 QD and one coat EPICON ZINC RICH PRIMER B-2 on CMP CERAZEUS”, dated 2020-03-25.

Marking of product

Product/package shall be marked with *manufacturer’s name and address*; Chugoku Marine Paints, Ltd. produced by Kobe Paints, Ltd. Hyogo, Japan, *type designation* **EPICON ZINC RICH PRIMER B-2 + CMP NOVA 2000 / EPICON ZINC RICH PRIMER B-2 + CMP NOVA 2000 QD**, 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 GL CP-0338.

END OF CERTIFICATE