



Certificate no.:
TAK00002EV

TYPE APPROVAL CERTIFICATE

This is to certify:

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

with type designation(s)
Jotacote Universal HF002 KR

issued to

Jotun A/S
SANDEFJORD, Norway

is found to comply with

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:

For use in ballast tanks, double-skin spaces, cofferdams and similar areas. Surface preparation and coating application according to PSPC or manufacturer's recommendations, whichever is stricter.

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

Issued at **Hamburg** on **2024-09-26**

This Certificate is valid until **2029-09-25**.

for **DNV**

DNV local unit: **Sandefjord**

Approval Engineer: **Gisle Hersvik**

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 USD 300 000.



Form code: TA 251

Revision: 2023-09

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Product description

Jotacote Universal HF002 KR: a fast drying two-component polyamine cured epoxy coating.

Manufactured by

Chokwang Jotun Ltd., 96, Gwahaksandan 1-ro, Gangseo-gu, Busan, 46742, Republic of Korea

DNV local office: Busan

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.

Jotacote Universal HF002 KR is approved for application on blast cleaned surfaces and on prequalified shop primed surfaces. The following shop primers have been prequalified:

- | | |
|-------------------------------|------------------------------|
| - Muki Z 2001 | [Jotun A/S] |
| - Sigmaweld 165 | [PPG / Sigma Coatings] |
| - KCI ZINC 1000 | [Kangnam Jevisco Co., Ltd.] |
| - Cerabond 2000 | [Chugoku Samhwa Paints Ltd.] |
| - Galvany Shopprimer IZ182(J) | [KCC Corp.] |
| - Galvany Shopprimer IZ182(K) | [KCC Corp.] |
| - Galvany Shopprimer IZ182(S) | [KCC Corp.] |

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 **Jotacote Universal HF002 KR** 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.

Type Approval documentation

Tests carried out

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

- DNV GL AS Oil & Gas Materials Bergen, Report No.: 2020-5014, "Ballast Tank coating test of 2x 160µm Jotacote Universal HF002 on Muki Z 2001 shop primer", dated 2020 05-15.
- DNV GL AS Oil & Gas Materials Bergen, Report No.: 2019-5340, "Crossover coating test of 2x 160µm Jotacote Universal HF002 on Sigmaweld 165 shop primer", dated 2019 11-07.
- DNV GL AS Oil & Gas Materials Bergen, Report No.: 2019-5341, "Crossover coating test of 2x 160µm Jotacote Universal HF002 on KCI Zinc 1000 shop primer", dated 2019 11-07.
- DNV GL AS Oil & Gas Materials Bergen, Report No.: 2019-5342, "Crossover coating test of 2x 160µm Jotacote Universal HF002 on Cerabond 2000 shop primer", dated 2019 11-07.
- DNV GL AS Oil & Gas Materials Bergen, Report No.: 2021-5228, "Crossover coating test of 2x 160µm Jotacote Universal HF002 on Galvany IZ 182(J) shop primer", dated 2021 06-30.
- DNV GL AS Oil & Gas Materials Bergen, Report No.: 2020-5427, "Crossover coating test of 2x 160µm Jotacote Universal HF002 on Galvany IZ 182(K) shop primer", dated 2020 08-20.
- DNV GL AS Oil & Gas Materials Bergen, Report No.: 2019-5339, "Crossover coating test of 2x 160µm Jotacote Universal HF002 on Galvany IZ 182(S) shop primer", dated 2019 11-07.

Marking of product

Product/package shall be marked with *manufacturer's name and address*: **Chokwang Jotun Ltd., Korea**, *type designation* **Jotacote Universal HF002 KR**, 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 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