



Certificate Of Fire Approval

This is to certify that the product detailed below will be accepted for compliance with the applicable Lloyd's Register Rules and Regulations and with the International Convention for the Safety of Life at Sea, (SOLAS), 1974, as amended, for use on ships and offshore installations classed with Lloyd's Register, and for use on ships and offshore installations when authorised by contracting governments to issue the relevant certificates, licences, permits etc.

Manufacturer	KCC Corporation
Address	Ulsan Plant, 30, Bangeojinsunhwan-doro, Dong-gu, Ulsan, Republic of Korea
Type	MATERIAL HAVING LOW FLAME SPREAD CHARACTERISTICS & NOT CAPABLE OF PRODUCING EXCESSIVE SMOKE & TOXIC PRODUCTS OF COMBUSTION
Description	Fire-Resisting Material – Type: “Koramel Enamel LT313” Paint System
Trade Name	Koramel Enamel LT313
Specified Standard	IMO Res. MSC.307(88) – (2010 FTP Code) Annex 1 Part 5 and Annex 2

This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Lloyd's Register North America, Inc. of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document and its supplementary Type Approval Terms and Conditions form part of this Certificate.

This certificate remains valid unless cancelled or revoked, provided the conditions in the attached Design Appraisal Document are complied with and the equipment remains satisfactory in service.

Bruce McDonald

Technical Authority - Statutory to Lloyd's Register North America, Inc.
A member of the Lloyd's Register group

1330 Enclave Parkway, Houston, Texas, 77077,
United States

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.



DESIGN APPRAISAL DOCUMENT

Page	2 of 3
Certificate No:	SAS F190018-02
Issue Date:	26/05/2023
Expiry Date:	05/02/2024
Reference:	UKITSO/FIRE/TA/JG/BM/WP50279058/PRJ11100410723

ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F190018-02

The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions, and this Design Appraisal Document forms part of the Certificate.

This Certificate Supersedes and is an Amendment of Certificate Number: SAS F190018

APPROVAL DOCUMENTATION

TEST REPORTS

Fire Insurers Laboratories of Korea (FILK), 1030 Gyeongchung-daero, Ganam-eup, Yeosu-Si, Gyeonggi-Do, 469-881, Korea; Test Report No. A2014-1112 dated 25th November 2014.

CONDITIONS OF CERTIFICATION

1. When applied to a metallic substrate.
2. Consisting of: one coat of 'Koramel Enamel LT313' epoxy based paint, spray applied at a dry film thickness 40µm.
3. Smoke and toxicity criteria is satisfied by meeting the total heat release (Qt) and peak heat release rate (Qp) as stated in IMO Fire Test Procedures Code, Annex 2, Section 2.2.
4. Production items are to be manufactured in accordance with a quality control system which shall be maintained to ensure that items are of the same standard as the approved prototype.
5. The certificate holder is solely responsible for the products supplied under this Certificate and to ensure that their products, are fully compliant with the relevant statutory regulations as applicable and are designed, manufactured and installed to the same quality and specifications as the prototype tested, including components that are designed and manufactured by third parties.

Notes

1. This paint scheme is approved for all variations of the products listed in this certificate that have an equal or lower organic content than the specimen tested. Where organic content is similar (within 5%), the paint scheme is approved for all listed products of a lighter colour than the specimen tested. Please consult the Manufacturer with regards to the approved range based upon the test reports listed and approved in this Certificate.
2. Application shall be in accordance with applicable Manufacturers Guidance.

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Page

3 of 3

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PLACE OF PRODUCTION

KCC Corporation

Ulsan Plant
30, Bangeojinsunhwan-doro
Dong-gu
Ulsan
Republic of Korea

KUMKANGPAINT. INDUSTRY. CO., LTD.

86-75, Chugok-gil
Gogyeong-myeon
Yeongcheon-si
Gyeongsangbuk-do
Republic of Korea

Bruce McDonald
Technical Authority-Statutory
Lloyd's Register Americas

Supplementary Type Approval Terms and Conditions

This certificate and Design Appraisal Document relates to type approval, it certifies that the prototype(s) of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein, it does not mean or imply approval for any other use, nor approval of any products designed or manufactured otherwise than in strict conformity with the said prototype(s)

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