

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Surface Material of Low Flame Spread**with type designation(s)
UNIVERSAL MIO-50 (0482)

Issued to

COSCO Kansai Paint & Chemicals (Tianjin) Co., Ltd.
Tianjin, China

is found to comply with

DNV GL rules for classification – Ships**DNV GL offshore standards****DNV GL statutory interpretations DNVGL-SI-0364 – SOLAS interpretations****Application :****Low flame spread surface material, not generating excessive quantities of smoke nor toxic products in fire.****This certificate is recognized by Transport Canada.****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**This Certificate is valid until **2021-06-21**.Issued at **Hamburg** on **2016-06-22**DNV GL local station: **Tianjin**for **DNV GL**Approval Engineer: **Pavel Golyshev**

Antje Fleischhauer
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.

Job Id: **262.1-022314-1**
Certificate No: **TAF00000BU**

Product description

Epoxy based coating with Micaceous Iron Oxide (MIO).

Volatile Organic Compounds (VOC): 210 g/L, acc. to EU Directive 2004/42/EC, subcategory j

Tested colour: grey

Mixing ratio: 9:1 (base : hardener)

Relative density for base (water=1): 1.60 ± 0.05

Nominal Dry Film Thickness (DFT) is 200 μm (0.200 mm) corresponding to 0.385 kg/m² layer dry weight.

Application/Limitation

Approved for use on a metallic substrate with thickness of at least 0.75 mm.

Maximum gross calorific value shall be documented separately where applicable, ref. SOLAS Chapter II-2 Reg. 5.3.2.

Each product to be supplied with its manual for application and maintenance.

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, October 2015.

Test report No. FT16114 dated 16th of March 2016 from Far East Fire Testing Centre (FEFTC), Shanghai, China.

Tests carried out

Tested according to IMO 2010 FTP Code Part 5 and Annex 2 Item 2.2.

Marking of product

The product or packing is to be marked with name of manufacturer and type designation.

Transport Canada Approval

Based on the procedures laid down in the Transport Canada Publication entitled "*Approval Procedures for, Life Saving Equipment and Structural Fire Protection Products (TP 14612)*", DNV GL confirms that the product/s listed in this certificate is/are in accordance with Transport Canada's requirements.

Periodical assessment

DNV GL's surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in DNVGL-CP-0338 Section 4.