Marine & Offshore Division

Certificate number: 23131/B0 BV
File number: ACM 136/2103/01
Product code: 2180H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

T-ISS B.V.

Dinxperlo - NETHERLANDS

for the type of product

ANTI-SPRAYING PIPE FLANGES & JOINTS SYSTEMS

SPRAYSTOP Standard and SPRAYSTOP 50 Plus anti-splash tapes

Requirements:
- BUREAU VERITAS Rules for the Classification of Steel Ships
- SOLAS 74 as amended, Regulation II-2/4.2.2.5 /4.2.3 /4.2.4

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 05 Mar 2020

For BUREAU VERITAS,
At BV GRONINGEN, on 05 Mar 2015,
John Mondt

BUREAU VERITAS SURVEYORS AT PARIS 1828 GRONINGEN INTERNATIONAL REGISTER

This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

SPRAYSTOP Standard and SPRAYSTOP 50 Plus anti-splash tapes

Design Specification

Size	Thickness (mm)	Width (mm)	Length (m)
Spray Stop standard	0.21 ± 0.017	35 to 1000	10
Spray Stop 50 Plus	0.33 ± 0.02	35 to 1000	10

	Total thickness Spray stop standard (mm)	Total thickness Spray stop 50 Plus (mm)
Al-glass fiber	0.110 ± 0.01	0.210 ± 0.01
Glue	0.050 ± 0.005	0.070 ± 0.005
PET Liner	0.050 ± 0.002	0.050 ± 0.002

	SPRAYSTOP	SPRAYSTOP 50 Plus
Maximum pressure (bar)	21	50 (with minimum two layers)
Maximum fluid temperature (°C)	150	150

Materials

- Multilayer Aluminium/ Glass cloth/ PET liner with special adhesive
- Structure: Surface printing/ Aluminium foil/ coated layer/ glass fiber layer/ silicon coated layer/ clear PET liner

Material Component	Top side	Glue	Liner
Spray Stop standard	Al-Glass Fiber HD108	KR3700	PET Coated FB50L
Spray Stop 50 Plus	Al-Glass Fiber HD7628	KR3700	PET Coated FB50L

When other choices of materials are used per manufacturer's recommendations, the BV agreement is to be obtained.

2. DOCUMENTS AND DRAWINGS

- Manufacturer's specification sheet dated 20/04/2005
- Letter for T-ISS, declaration KNW dated July 2012
- Last issue of the installation and application manual of spray stop tape
- Last issue of the product description of spray stop tape 50 Plus for high pressure

No departure from the above documents shall be made without the prior consent of the Society. The manufacturer must inform the Society of any modification or changes to these documents and drawings.

3. TEST REPORTS

- Tests carried out: Adhesive test, shelflife, tensile strength, pressure test per the test reports N° UTCK 050413-1 dated 15/04/2005 from UTC Laboratory (Korea) and N° 2911/07/2005 dated 30/11/2005 from Gameva bv

- **SPRAYSTOP Standard:** Surface flammability tests according to IMO Res. A.653(16) Annex 1, Part 5 per the test report N° 20050289 dated 21/06/2005 issued by the Fire Insurers Laboratories of Korea (Korea)

- **SPRAYSTOP 50 Plus:** Testing of the surface flammability to certificate a low flame-spread characteristic according to IMO resolution MSC.307(88) - (2010 FTP Code) Annex 1, Part 5 per the test report N° 20150285 dated 03/03/2015 by MPA Dresden GmbH Laboratory in Freiberg (Germany)

- Adhesive strength and tensile strength. test report N° KWQAP20130215BTISS dated 15/02/2013

- Adhesive strength and tensile strength. test report N° KWQAP20130215ATISS dated 15/02/2013

- Puncture impact report test N° T2012-303590-004 dated 11/12/2012

4. APPLICATION / LIMITATION

4.1 The SPRAYSTOP Standard and SPRAYSTOP 50 Plus anti-splash tapes may be used for screening in systems for fuel oil, lube oil and other flammable oils with pipe flanges and joints complying with the SOLAS 74 as amended, Regulation II-2/4.2.2.5; II-2/4.2.3; II-2/4.2.4.

4.2 The approval is restricted to piping systems which are readily accessible for maintenance and inspection purposes.

4.3 The SPRAYSTOP Standard and SPRAYSTOP 50 Plus anti-splash tapes cannot be used for pipes insulation or as replacement for pipe gaskets and sealings.

4.4 The manufacturer has to inform the users about proper methods of application instructions and general maintenance of the SPRAYSTOP Standard and SPRAYSTOP 50 Plus anti-splash tapes.

4.5 The on-board installation is to be satisfactorily witnessed by the Society's Surveyor for each application on board ships.

5. PRODUCTION SURVEY REQUIREMENTS

5.1 The products are to be supplied by **T-ISS B.V.** in compliance with the type described in this certificate and in compliance with the requirements stated on the front page of this certificate. This type of product is within the category HBV of BUREAU VERITAS Rule Note NR 320.

5.2 **T-ISS B.V.** has to make the necessary arrangements to have its works recognized by BUREAU VERITAS in compliance with the requirements of NR 320 for HBV products.

5.3 No BUREAU VERITAS Certificate is required.

Place of production
T-ISS B.V.
Safety Services
Helmkamp 32-34
7091 HR Dinxperlo
THE NETHERLANDS

6. MARKING OF PRODUCT

The product shall be marked with at least:

- Manufacturer name or logo
- Format
- Fire-technical rating

7. OTHERS

This approval is given on the understanding that the manufacturer will accept full responsibility for informing shipbuilders or their sub-contractors of the proper methods of fitting and general maintenance of the products and of the conditions of this approval.

This certificate supersedes the Type Approval Certificate No. 23131/A0 BV issued on 21/06/2010 by the Society.

***** END OF CERTIFICATE *****

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