



Marine &amp; Offshore

Certificate number: 13562/D0 BV

File number: ACE 01/113/08

Product code: 2501H

*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*

**UNIKA UNIVERSAL KABLO SANAYI VE TICARET A.S.**  
TEKIRDAG - TURKEY

*for the type of product*

**CABLES (LOW VOLTAGE)**

0.6/1 kV.

U-HFxxx m, MGCH & MGH series.

### Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

IEC 60092-350 (2014), IEC 60092-353 (2016), IEC 60092-360 (2014)

IEC 60228 (2004)

IEC 60331-1/2 (2018), IEC 60331-21 (1999)

IEC 60332-1-2 (2015), IEC 60332-3-22 Cat.A (2018)

IEC 60754-1/2 (2011)

IEC 61034-1/2 (2013)

*This certificate is issued to attest that Bureau Veritas Marine & Offshore 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: 07 May 2024**

**For Bureau Veritas Marine & Offshore,**

At BV ISTANBUL, on 07 May 2019,

Gurcan Yilmaz



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 Marine & Offshore. 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 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 Marine & Offshore 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.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

## THE SCHEDULE OF APPROVAL

### **1. PRODUCT DESCRIPTION:**

Low voltage cables for Marine and Offshore applications.

#### **1.1 - Specifications:**

Rated voltage:	0,6/1 kV
Temperature class:	90°C
Flame retardant:	IEC 60332-1 and IEC 60332-3-22 Cat. A
Fire resistant:	IEC 60331-1/2 (FR type except MGCH-FR), IEC 60331-21 (FR Type)
Halogen Free:	IEC 60754-1/2
Low Smoke:	IEC 61034-1/2

#### **1.2 - Construction:**

Conductor:	Plain or tinned stranded copper - Class 2 or Class 5
Fire protection:	Mica tape (FR Type only)
Insulation:	Cross-Linked PolyEthylene - XLPE, HEPR (MGCH, MGCH-FR, MGCH-EMC & MGH types only)
Filler:	Halogen Free material
Screen:	Collective copper backed Polyester tape (EMC Type only)
Armouring:	Plain or tinned copper wire braid, or galvanized steel wire braid (Armoured Type only)
Outer Sheath:	Halogen Free Thermoplastic compound - SHF1

#### **1.3 - Approval range:**

Type	Number of core	Cross Sect. (mm <sup>2</sup> )
<b>U-HF m</b> <b>U-HFA m</b>	1	1.0 to 300
	2	1.0 to 25
	3	1.0 to 150
	4	1.0 to 120
	5 to 61	1.0 to 4
<b>U-HFA m</b>	2	50 & 70
<b>U-HFA m-EMC</b>	3	2.5 to 95
<b>U-HFFR m</b> <b>U-HFFRA m</b>	1	1.0 to 300
	2	1.0 to 16
	3	1.0 to 120
	4	1.0 to 16
	5 to 27	1.0 to 1.5
<b>U-HFFRA m EMC</b>	3	2.5 to 120
<b>MGCH</b>	1	25 & 95
	2	1.5 to 6
	3	1.5 to 95
	4 to 19	1.5
<b>MGCH-FR</b>	3	1.5 to 25
	4 to 16	1.5
<b>MGCH-EMC</b>	3	2.5 to 95
<b>MGH</b>	1	25 to 95
	2	1.0 to 95
	3	1.0 to 95

### **2. DOCUMENTS AND DRAWINGS:**

#### **UNIKA:**

- "U-HF m" data sheet N°4138021, dated 11 Apr 2019
- "U-HFA m" data sheet N°4271811, dated 12 Apr 2019
- "U-HFA m EMC" data sheet N°4267011, dated 12 Apr 2019
- "H-HFFR m" data sheet N°4138112, dated 12 Apr 2019
- "U-HFFRA m" data sheet N°4127122, dated 11 Apr 2019
- "U-HFFRA m EMC" data sheet N°4288511, dated 11 Apr 2019
- "MGCH" data sheet N°4152833, dated 11 Apr 2019
- "MGCH-FR" data sheet N°4152834, dated 12 Apr 2019
- "MGCH-EMC" data sheet N°4152835, dated 11 Apr 2019
- "MGH" data sheet N°4135517, dated 11 Apr 2019

**3. TEST REPORTS:**

**TSE:** Report N° 0.16.01.05/2002-1630 dated 19/06/2002 and Reports N° 0.16.01.05/2001-2712/2713/2714 dated 16/11/2001.

**Nexans:** Test certificates dated 13/11/2001 & 27/11/2001.

**Türk Pirelli Material Laboratory:** Test Reports N° 279/2 dated 29/05/2002 and N° 270 dated 15.02.2002.

**ÜNİKA:**

Routine tests, order 357 dated 22.01.2007, stamped by BV Surveyor.

Routine tests and Flame Tests according to IEC 60332-1 & IEC 60332-3-22 dated 02/2009 and BV Witnessed.

Tests reports N°13-172/1335, dated 15.08.2013, witnessed by BV'Surveyor.

Tests reports N°13-316/2481, dated 15.08.2013, witnessed by BV'Surveyor.

Tests reports N°500/FRM/007 Rev.1, dated 14.02.2014, witnessed by BV'Surveyor.

Halogen acid gas content tests reports dated 17.Mar.2014.

Mutual capacitance and measurements ratio dated 10.Mar.2014.

Smoke density tests reports dated 03.Mar.2014.

Flame propagation tests reports dated 03.Mar.2014.

Fire resistivity tests reports dated 03.Mar.2014.

Cold impact tests reports dated 10.Mar.2014.

Tests report dated 31 Mar. 2016

**SKY HOLDING PTE LTD:**

Test report N°SK/201109/1003, dated 05.09.2011.

**For Revision C3:****ÜNİKA:**

Tests report dated 21 Nov. 2017

**For Revision D0:****ÜNİKA:**

Tests report dated 12 Apr 2019.

**4. APPLICATION / LIMITATION:**

BUREAU VERITAS Rules for the Classification of Steel Ships and IEC 60092 series.

**5. PRODUCTION SURVEY REQUIREMENTS:**

5.1 - The CABLES (LOW VOLTAGE) are to be supplied by **ÜNİKA UNIVERSAL KABLO SANAYI VE TICARET A.S.** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **ÜNİKA UNIVERSAL KABLO SANAYI VE TICARET A.S.** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - For information, **ÜNİKA UNIVERSAL KABLO SANAYI VE TICARET A.S.** has declared to Bureau Veritas the following production site:

**ÜNİKA UNIVERSAL KABLO SANAYI VE TICARET A.S.**  
**VELIKOY SANAYI BOLGESI**  
**CERKEZKOY / TEKIRDAG**  
**TEKIRDAG**  
**TURKEY**

**6. MARKING OF PRODUCT:**

The cable shall be marked on the surface outer sheath, in a durable legible and visible manner, with the following information through the length of cable:

- Voltage grade.
- Cable symbol and temperature class.
- Number of conductors and conductor size.
- Applicable standard(s) to flame retardant and fire resistance if any.
- Manufacturer's name or trade mark.
- Year of manufacture.

**7. OTHERS:**

7.1 - It is **ÜNİKA UNIVERSAL KABLO SANAYI VE TICARET A.S.**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate N° 13562/C3 BV issued on 05 Apr 2018 by the Society.

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