



MARINE DIVISION

Certificate number: 07446/D0 BV

File number: ACE 01/113/05

Product code: 2505H

*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*

**INSTRUMENTATION AND COMMUNICATION CABLES**

250 V

Type: FMGCG

**Requirements:**

Bureau Veritas Rules for the Classification of Steel Ships  
IEC 60092-350/351/376/359, IEC 60228, IEC 60332-1-2

*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 is a renewal of certificate N° 07446/C1 BV, which expires on 27/03/2014*

**This certificate will expire on: 16 Apr 2019**

**For BUREAU VERITAS,**

At BV ISTANBUL, on 16 Apr 2014,

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. 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 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:

FMGCCG is a Flame Retardant, Instrumentation, Control and Communication cable with screen.

#### 1.1 - Specifications:

Rated voltage:	250 V according to DIN 89159
Temperature class:	90°C
Flame retardant:	IEC 60332-1

#### 1.2 - Construction:

Conductor:	Tinned or plain annealed copper - Class 2 or 5
Insulation:	Hard Grade Ethylene Propylene Rubber - HEPR according to DIN 89159
Tape:	Polyester tape
Armouring:	Tinned or bare copper braiding
Tape:	Polyester tape
Outer Sheath:	Cross-Linked thermoset compound - SE1 according to IEC 60092-359

#### 1.3 - Product Range:

Type	Number of Pair	Cross Sect. [mm <sup>2</sup> ]	Remarks
FMGCCG	1P to 27P	0.75	Flame retardant according to IEC 60332-1

### 2. DOCUMENTS AND DRAWINGS:

According to DIN 89159 standard.

Documents filed in ACE 01/113/05.

### 3. TEST REPORTS:

Type test report of 08.01.98 (Tests carried out in presence of BV Surveyor).

#### **Unika:**

- Routine test report and Flame test report according to IEC 60332-1 both dated 02/2009 and BV witnessed.
- Tests report N°500/FRM/007 Rev. 1, dated 10.02.2014, witnessed by BV's Surveyor.

### 4. APPLICATION / LIMITATION:

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

### 5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above cables are to be supplied by **Unika 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.

5.3 - **Unika 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:

**Unika 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:

- 1) - Voltage grade.
- 2) - Cable symbol and temperature class.
- 3) - Number of conductors and conductor size.
- 4) - Applicable standard(s) to flame retardant.
- 5) - Manufacturer's name or trade mark.
- 6) - Year of manufacture.

**7. OTHERS:**

7.1 - This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the cables at any time and that **Unika Universal Kablo Sanayi Ve Ticaret A.S.** will accept full responsibility for informing shipbuilders, shipowners or their sub-contractors of the proper methods of use and general maintenance of the cables and the conditions of this approval.

7.2 - This Certificate supersedes the Type Approval Certificate N° 07446/C1 BV issued on 27/03/2014 by the Society.

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