



**Marine & Offshore  
Division**

**Certificate number:** 17390/B0 BV

**File number:** ACE 01/796/01

**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*

**MIGUELEZ, S.L.**

LEON - SPAIN

*for the type of product*

**CABLES (LOW VOLTAGE)**

BARRYFLEX RV-K & AFIRENAS-X RZ1-K.

0.6/1 kV.

**Requirements:**

BUREAU VERITAS Rules for the Classification of Steel Ships.

IEC 60092-350/353/360 (2014), IEC 60228 (2004), IEC 60332-1-2 (2004), IEC 60332-3-22 Cat.A (2009), IEC 60754-1/2 (2011), IEC 61034-1/2 (2013).

*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: 18 Jun 2020**

**For BUREAU VERITAS,**

At BV MADRID, on 18 Jun 2015,

Montserrat Espin



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 electronic version is available at: <http://www.veristarpm.com/veristarnb/jsp/viewPublicPdfType.jsp?id=rkrqgowcuc>

BV Mod. Ad.E 530 October 2014

This certificate consists of 3 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION :

Flame retardant, Marine and Offshore Power, Lighting and Control cables.

#### 1.1 - Specifications:

Rated voltage:	0.6/1 kV according to IEC 60092-353
Temperature class:	90°C
Flame retardant:	IEC 60332-1 (Both Types) and IEC 60332-3-22 (Z1 Type only)
Halogen Free:	IEC 60754-1/2 (Z1 Type only)
Low Smoke:	IEC 61034-1/2 (Z1 Type only)

#### 1.2 - Construction:

Conductor:	Stranded plain annealed copper - Class 5
Insulation:	Cross-Linked PolyEthylene - XLPE
Filler:	PVC or Halogen Free Thermoplastic compound depending on type
Sheath:	Thermoplastic compound - PVC/ST2 (V Type) Halogen Free Thermoplastic compound - SHF1 (Z1 Type)

#### 1.3 - Product Range:

Type	Number of Core	Cross-Sect. (mm <sup>2</sup> )	Remarks
BARRYFLEX RV-K	1 2 & 3	1.5 to 300 1.5 to 25	Flame Retardant according to IEC 60332-1
AFIRENAS-X RZ1-K	4 5	1.5 to 150 1.5 to 25	Flame Retardant according to IEC 60332-1 & IEC 60332-3-22 (Cat.A) Halogen Free according to IEC 60754-1/2 Low Smoke according to IEC 61034-1/2

### 2. DOCUMENTS AND DRAWINGS :

#### Miguélez:

Technical Specifications, Barryflex RV-K 2nd Ed. dated January 2009  
Technical Specifications, Afirenas-x RZ1-K 2nd Ed. dated January 2009  
Technical Specifications for Cables and Wires both dated January 2009.

### 3. TEST REPORTS :

#### CEIS:

RV-K: Test Reports No. CBL.09/3430/09, CBL.09/3431/09 and CBL.09/3432/09 all dated 2009/11/03  
RZ1-K: Test Reports No. CBL.09/3426/09, CBL.09/3427/09 and CBL.09/3428/09 all dated 2009/11/03.

#### Miguelz:

Tests reports N°2118509 & 2117473, both dated 07.04.2015.

### 4. APPLICATION / LIMITATION :

- 4.1 - BUREAU VERITAS Rules for the Classification of Steel Ships.  
4.2 - Approval valid for units having to comply with IMO Resolution A649 (The "MODU Code").

### 5. PRODUCTION SURVEY REQUIREMENTS :

- 5.1 - The cables are to be supplied by **MIGUELEZ, S.L.** 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 - **MIGUELEZ, S.L.** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products :

**MIGUELEZ, S.L.**  
**Av PABLO DIEZ, 157**  
**24010 LEON**  
**SPAIN**

**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 **MIGUELEZ, S.L.** will accept full responsibility for informing shipbuilders, ship-owners 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 No. 17390/A0 BV issued on 19.02.2010. by the Society.

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