



Certificate No. 03-001781/031475

TYPE APPROVAL CERTIFICATE

This is to certify that this product complies with the Rules for the classification of ships, Part 1 - General requirements, Chapter 3 - Type approval of products.

TYPE AND DESCRIPTION OF PRODUCT:

**SHIPBOARD POWER AND CONTROL CABLES HALOGEN FREE AND FLAME
RETARDANT / FIRE RESISTANT 0,6/1 kV**

**MGG, MGCG, MGH, MGH-FFR, MGCH, MGCH-FFR, MGCH-EMC, M2XH, M2XH-FFR, M2XCH,
M2XCH-FFR, M2XCH-EMC, M2X, M2XY-FR, M2XCY-FR**

MANUFACTURER:

UNTEL KABLOARI SANAYI VE TICARET A.S.
VAT No. ULUCINAR V.D./917001
6069 Makine O.S.B. 6. Cad. N:4, 41455 DILOVASI-KOCAELI
TURKEY

THE PRODUCT MEETS FOLLOWING RULES/REGULATIONS:

CRS RULES FOR THE CLASSIFICATION OF SHIPS, PART 12 - ELECTRICAL EQUIPMENT

Construction:	IEC 60092-350 IEC 60092-353 IEC 60092-360
Halogen-free:	IEC 60754-1
Acidity & pH:	IEC 60754-2
Smoke density:	IEC 61034-1 IEC 61034-2
Flame retardance:	IEC 60332-1-2 IEC 60332-3 Cat. A
Fire resistance:	IEC 60331-21
Conductor resistance:	IEC 60228

FURTHER DETAILS OF THE PRODUCT AND CONDITIONS FOR CERTIFICATION ARE GIVEN OVERLEAF.

APPROVAL IS VALID UNTIL: **2023-07-01**

Place and date: Split, 2020-10-22

Seal

Marinko Popović, dipl.ing.

NOTE: This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Croatian Register of Shipping of any modification or changes to the product in order to obtain a valid certificate.

DETAILED PRODUCT DESCRIPTION:

Halogen-free, low smoke, flame retardant / fire resistant (FFR type only), insulated power and control cables (0.6/1 kV)
0.6/1 kV maximum conductor temperature 90°C

Cable Type	No of Cores	Cross Sect area [mm ²]
MGG, MGCB, MGH, MGH-FFR, MGCH, MGCH-FFR, M2XH, M2XCH	1	2.5 – 300
	2	1 – 25
	3	1 – 120
	4	1 – 95
	5 & 7	1, 1.5 & 2.5
	10, 12 & 14	1 & 1.5
	16, 19, 24, 27 & 37	1.5
M2XY-FFR	1	4 – 35
	2	1 – 10
	3	1 – 120
	4	1 – 95
	5	1, 1.5 & 2.5
	7, 10, 12 & 14	1 & 1.5
	16, 19, 24, 27 & 37	1.5
M2XCY-FFR	1	4 – 300
	2	1 – 25
	3	1 – 120
	4	1 – 95
	5	1, 1.5 & 2.5
	7, 10, 12 & 14	1 & 1.5
	16, 19, 24, 27 & 37	1.5
MGCH-EMC	3	1.5 – 120
M2X	1	0.5 – 240
M2XCH-FFR	1	1 – 300
	2, 3, 4 & 5	1 – 240
	6, 7, 8, 9, 12, 14, 16, 18, 19, 20, 21, 24, 25, 27, 30, 32, 36, 37, 40, 42 & 48	1, 1.5 & 2.5
	10	0.75, 1, 1.5 & 2.5
	60	1 & 1.5
M2XH-FFR	1	0.75 – 300
	2, 3, 4 & 5	1 – 240
	6, 7, 8, 9, 12, 14, 16, 18, 19, 20, 21, 24, 25, 27, 30, 32, 36, 37, 40, 42 & 48	1, 1.5 & 2.5
	60	1 & 1.5
M2XCH-EMC	1	1 – 630
	2, 4 & 5	1 – 240
	3	1 – 400
	6, 7, 8, 9, 12, 14, 16, 18, 19, 20, 21, 24, 25, 27, 30, 32, 36, 37, 40, 42 & 48	1, 1.5 & 2.5
	60	1 & 1.5

APPLICATION / LIMITATIONS:

Fixed installations in marine, offshore and industrial use.

TYPE APPROVAL DOCUMENTATION:

Catalog UNTEL Marine cables

Test reports:

Report No. 02.2010.LR.01 – 05 Feb2010
Report No. 02.2010.LR.02 – 05 Feb2010
Report No. 02.2010.LR.04 – 05 Feb2010
Report No. 02.2010.LR.05 – 05 Feb2010
Report No. 02.2010.LR.06 – 05 Feb2010
Report No. 02.2010.LR.07 – 05 Feb2010
Report No. 02.2010.LR.08 – 05 Feb2010
Report No. 02.2010.LR.12 – 05 Feb2010
Report No. 02.2010.LR.13 – 05 Feb2010
Report No. 02.2010.LR.14 – 05 Feb2010
Report No. 02.2010.LR.15 – 05 Feb2010
Report No. 02.2010.LR.16 – 05 Feb2010
Report No. 02.2010.LR.19 – 05 Feb2010
Report No. 02.2010.LR.20 – 05 Feb2010
Report No. 02.2010.LR.21 – 05 Feb2010

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

CONDITIONS FOR CERTIFICATION:

The Society reserves the right to require check tests to be carried out on the cables at any time.