



# TÜRK LOYDU

## TYPE APPROVAL CERTIFICATE

This Certificate consists of 2 pages.

This is to certify that the

**POWER, SIGNAL AND COMMUNICATION CABLES**

With type designations

**MGGO - LMGGO**

Manufactured by

**ÜNTEL KABLoları SANAYİ VE TİC. A.Ş.**

Is found to comply with

TÜRK LOYDU Rules for Classification of Steel Ships – Electrical Installation (July 2016) TÜRK LOYDU Rules for the Classification of Naval Ships – Electrical Installation (Jan 2016) IEC 60092/350-353-360, VG 95214, VG 95218 60/61, IEC 60332/1-3 Cat A, IEC 60754/1-2, IEC 60754/1-2

**Application** : Power, Signal and Communication cables of ships

**Design** : Voltage class 0.6/1 kV 90°C

**Sizes** : from 1,5mm<sup>2</sup> to 400mm<sup>2</sup> for 1 to 24 core cables

**Address of Manufacturer** : Demirciler Köyü, Makine OSB, 6. Cadde, No:4, 41455 Dilovası-Kocaeli

**Place and date** : İSTANBUL / 12.01.2018

Subject to the conditions referred to in the following pages, this certificate is valid from 29.06.2017 until 10.08.2022.

This certificate supersedes TO.DEB.17-1009 numbered and 11.08.2017 date certificate

**Emrah SÖĞÜTÇÜ**  
New Building Division Manager

**O.Yalçın YALMAN**  
Surveyor



**Product description:** POWER, SIGNAL AND COMMUNICATION CABLES

**Type Designation** :

MGGO (conductor + insulation+ bedding+outer sheath)

LMGGO (conductor + insulation+ seperator+outer sheath)

**Materials used** :

**Material for conductors:** Electrolytic, Stranded, Annealed Copper Wire IEC 60228

**Insulation:** Halogen free, cross-linked polyalkene compound (for LMGGO ),

Halogen free EPR or halogen free HEPR (for MGGO ),

**Seperator :** Separating foil over cores (for LMGGO )

**Bedding :** Halogen Free Compound

**Outer sheath:** Halogen free, cross linked Polyolefin compound

**Application/ Limitation (Approval conditions):**

For each new building and in service ships under major modifications, factory acceptance tests (routine tests) for cables shall be carried out before mounted to the ship with the witness of TL surveyor.

**Documentation**

:Product data sheets and test reports

**Test carried out (and results) :** Type tests according to VG 95218 60/61, IEC 60092-350

**Place of test carried out**

: ÜNTEL Cable Factory- Dilovası/Kocaeli

**Marking of product:** The product to be marked same as below mentioned.

ÜNTEL [type] [size] [volt. class] [related standards] [temp. class]

  
**O. Yalçın YALMAN**  
Surveyor

This certificate is subject to terms and conditions described below:

- Any significant change in design or construction may render this Certificate invalid. Type Approval Certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. This certificate is not valid for products without marking above mentioned. The manufacturer should notify TÜRK LOYDU of any modifications or changes to the equipment in order to obtain valid certificate. This certificate shows that tested specimens as representative of the product complies of the TÜRK LOYDU rules, and relevant international instruments that apply to it.