Certificate No:
TAE00004BA

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Electric Power Cable

with type designation(s)
Üntel MGSGO (VG 95218/60)

Issued to
Untel Kablolari San. ve Tic. A.S.
Dilovasi, **Turkey**

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Rated voltage (kV)	**AC 1,2 / DC 1,8**	**or**	**AC 0,66 / DC 1**
Temp. class (°C)	**90**		

Issued at **Hamburg** on **2021-08-17**

This Certificate is valid until **2026-08-16**.
DNV local station: **Istanbul**

Approval Engineer: **Carsten Hunsalz**

for **DNV**
Digitally Signed By: Schaarmann, Arne
Location: DNV GL SE Hamburg, Germany
Signing Date: 2021-08-19

Arne Schaarmann
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Product description

Type: Üntel MGSGO (VG 95218/60)

Rated voltage: 1200V AC, 1800V DC or 660V AC, 1000V DC (Type D)
Maximum operating conductor temperature: 90 °C
Conductor: Copper, stranded IEC 60228
Insulation: Halogen free cross linked polymeric material
Screen / braid: Plain copper wire braid
Outer sheath: Halogen free, cross linked elastomeric material

Number of cores	Cross-sectional area	
1	4 to 300 mm²	A001 to A020
2	1,5 to 25 mm²	B034 to B040
3	1,5 to 120 mm²	B041 to B052, B065 to B069, B062 to B063
4	4 to 95 mm²	B053 to B061, B070 to B074
5G	2,5 mm²	B100
5G	4 mm²	B101
7G	2,5 mm²	B103
33	0,75 mm²	B104
19	6 mm²	D002 (660V AC, 1000V DC)

Application/Limitation

The cables have been approved for firm laying, preferable on ships of the Federal Armed Forces.

Type Approval documentation

Test Report: VDE Certificate of conformity with factory surveillance
Certificate No. 40050424 / Ref. No.1773000-5970-0060 / 250263, dated 2019-07-18

BAAINBw Certificate of Approval No. U3.3h/19065, dated 19.07.2019

Specification: VG 95218-60:2016-12 Type A / B / D

Tests carried out

Standard	Issued	General description	Limitation
VG 95218-60	2016-12	Cables and insulated wires — Part 60: Cables and insulated wires with and without screen, with sheath, halogenfree, low fire hazard	
VG 95218-2	2017-12	Cables and insulated wires - Part 2: Generic specification	
IEC 60332-1-2	2015-07	Tests on electric and optical fibre cables under fire conditions – Part 1-2: Test for vertical flame propagation for a single insulated wire or cable –Procedure for 1 kW pre-mixed flame	
IEC 60332-3-24	2018-07	Tests on electric and optical fibre cables under fire conditions – Part 3-24: Test for vertical flame spread of vertically-mounted bunched wires or cables – Category C	
IEC 60754-2	2019-11	Test on gases evolved during combustion of materials from cables - Part 2: Determination of acidity (by pH measurement) and conductivity	Halogen free: pH > 4,3 Conductivity < 10µS/mm
IEC 61034-1/2	2019-11	Measurement of smoke density of cables burning under defined conditions – Test apparatus, procedure and requirements	Low smoke Light transmittance >60%

Marking of product

ÜNTEL VG 95218 T 060 Type Dash No MGSGO number of cores x size WEEK YEAR LOT NO MT.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE