TYPE APPROVAL CERTIFICATE

Certificate no.:
TAE00004BE
Revision No:
1

This is to certify:

that the Low Voltage Cable

with type designation(s)
Üntel LFMGSSGO (VG 95218/64), LFMSGSGO (VG 95218/65), LFMSGSSGO (VG 95218/66)

issued to
Untel Kablolari San. ve Tic. A.S.
Dilovası, Türkiye

is found to comply with
DNV 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 (V)	**AC 250, DC 355**
Temp. class (°C)	**90**

Issued at **Hamburg** on **2026-10-02**

This Certificate is valid until **2031-10-01**.
DNV local unit: **Istanbul**

Approval Engineer: **Carsten Hunsalz**

for **DNV**
Digitally signed by: Dariusz Lesniewski
Location: DNV SE, Germany

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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to USD 300 000.

Product description

Type: Üntel LFMGSSGO (VG 95218/64), LFMSGSGO (VG 95218/65), LFMSGSSGO (VG 95218/66)

Rated voltage: 250V AC, 355V DC
Maximum operating conductor temperature: 90 °C
Conductor: Copper, stranded IEC 60228
Insulation: Halogen free cross linked polymeric material
Individual screen: Plain copper wire braid (for LFMSGSGO and LFMSGSSGO)
Screen: Plain copper wire braid (double screen for LFMGSSGO and LFMSGSSGO)
Outer sheath: Halogen free, cross linked elastomeric material

Number of cores and Cross-sectional area

2, 4, 7, 12, 19, 27	x2x0,4mm²	LFMGSSGO A001 to A006
30, 45,	x2x0,4mm²	LFMGSSGO B001 to B002
2, 4, 7, 12, 19, 27	x2x0,4mm²	LFMSGSGO A001 to A006
5, 12	x3x0,4mm²	LFMSGSSGO A001 to A002

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. 40052489 / Ref. No. 1773000-5970-0064 / 307827, dated 2023-10-23

BAAINBw Certificate of Approval No. U3.3h/23182, dated 29.11.2023

VDE Certificate of conformity with factory surveillance
Certificate No. 40053376 / Ref. No. 1773000-5970-0065 / 334796, dated 2025-10-28

BAAINBw Certificate of Approval No. U3.3h/25148, dated 29.10.2025

VDE Certificate of conformity with factory surveillance
Certificate No. 40049462 / Ref. No. 1773000-5970-0066 / 307825, dated 2023-10-31

BAAINBw Certificate of Approval No. U3.3h/23183, dated 29.11.2023

Specification: VG 95218-64,65,66:2022-04

Tests carried out

Standard	Issued	General description	Limitation
VG 95218-64	2022-04	Cables and insulated wires - Part 64: Cable with single and double screen, with sheath, pair and triple formation, not screened, halogenfree, low fire hazard	
VG 95218-65	2022-04	Cables and insulated wires - Part 65: Cable with screen and sheath, cabled single elements, screened, halogenfree, low fire hazard	
VG 95218-66	2022-04	Cables and insulated wires - Part 65: Cable with screen and sheath, cabled single elements, screened, halogenfree, low fire hazard	
VG 95218-2	2023-12	Cables and insulated wires - Part 2: Generic specification	

Standard	Issued	General description	Limitation
IEC 60332-1-2	2025-06	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 064 Type Dash No LFMGSSGO number of cores x size WEEK YEAR LOT NO MT.
ÜNTEL VG 95218 T 065 Type Dash No LFMSGSGO number of cores x size WEEK YEAR LOT NO MT.
ÜNTEL VG 95218 T 066 Type Dash No LFMSGSSGO 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