

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Low Voltage Cable

with type designation(s)
TE- t.p.c. (0,5 - 50) mm²

Issued to

HEW-Kabel GmbH
Wipperfürth, Germany

is found to comply with

DNV GL rules for classification – Ships

DNV GL offshore standards

DNV GL rules for classification – High speed and light craft

Application :

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

Voltage class (V) 60V DC or 25V AC / 600V
Temp. class (°C) 150

This Certificate is valid until **2021-08-09**.

Issued at **Hamburg** on **2016-11-22**

DNV GL local station: **Essen**

Approval Engineer: **Carsten Hunsalz**

for **DNV GL**

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Duy Nam Le
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

HEW FEP or ETFE single-core non sheathed cable

Type TE- t.p.c. (0,5 - 50) mm²
Rated voltage : 60 V DC or 25 V AC / 600 V
depending on cross section
Maximum operating conductor temperature: 150° C
Ambient temperature: - 100° C up to 200° C FEP (20000h)
- 100° C up to 150° C ETFE (20000h)
Conductor: Copper Cu vz / t.p.c.
Core insulation : FEP or ETFE
Cross-section area: 0,5 mm² to 50 mm²

Application/Limitation

Measures for limitation of the propagation of fire along cable bundles are required (fire stops)

Type Approval documentation

Test Report HEW-KABEL dated 2010-11-24./25 and dated 2011-08-08
Data Sheet HEW-KABEL: TD-Number 10351-026

Tests carried out

Standard	Release	General description	Limitation
ISO 6722	2011-10	Road vehicles 60 V and 600 V single-core cables	
UL 758	2010-07	Appliance Wiring Material	
VDE 0207-6	2004-10	Insulating and sheathing compounds for cables and flexible cords	
VG 95218-64	2013-12	Cables and insulated wires - Part 64: Cable with single and double screen, with sheath, pair and triple formation, not screened, halogenfree, low fire hazard, detail standard	
VG 95218-27	2008-06	Cables and insulated wires - Part 27: Cable with sheath, cross-reference list for standardization of types	
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	



Job Id:
Certificate No: **TAE00001CZ**

Marking of product

Example: HEW-KABEL - DNV GL No. TAE00001CZ – TE- t.p.c. - size – 60 V – special text

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.

Assessment to be performed at least every second year.

END OF CERTIFICATE