



# TÜRK LOYDU

## TYPE APPROVAL CERTIFICATE

This is to certify that the

### Sheathed Flexible Electrical Cable

TL Project No	24-2394
Manufacturer	ÜNTEL KABLOLARI SAN VE TİC A.Ş.
Address	Demirciler Köyü, Makine Osb 6. Cad No:4, 41455 Dilovası / Kocaeli
Product Type	H07RN-F
Reference Rule	<p>TS EN 60228 - CONDUCTORS OF INSULATED CABLES, 01.12.2005</p> <p>TL Rules, Part B, Chapter 5, Electric , 01.01.2024</p> <p>IEC 60332-1-2 Tests on electric and optical fibre cables under fire conditions - Part 1-2, 15.07.2004</p> <p>EN 50363-1 Insulating, sheathing and covering materials for low-voltage energy cables Part -1: Cross linked elâstomeric insulating compounds , 25.04.2006</p> <p>EN 50363-2- 1 Insulating, sheathing and covering materials for low voltage energy cables - Part 2-1: Cross-linked elastomeric sheathing compounds , 25.04.2006</p> <p>EN 50525-2-21, Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U<sub>0</sub>/U) - Part 2-21: Cables for general applications - Flexible cables with crosslinked elastomeric insulation , 22.11.2011</p> <p>EN 50525-1 Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U<sub>0</sub>/U) - Part 1: General requirements , 22.11.2011</p> <p>TS EN 60811-505 Electric and optical fiber cables, 12.06.2013</p> <p>TS EN 50289-4-17 Communication cables - Specifications for test methods, 18.04.2016</p>
Expire Date of Previous Certificate	04.09.2024
Place and Date	İSTANBUL / 07.01.2025

Subject to the conditions referred to in the following pages, this certificate is valid until 04.09.2029.

  
EMRAH SÖĞÜTÇÜ  
New Building Division Manager

132073

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 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.

<b>Product</b>	: Sheathed Flexible Electrical Cable
<b>Type of Product</b>	: H07RN-F
<b>Approval No / Date</b>	: PAE-EPAS/019603/24-2394/EA/23.09.2024
<b>Application</b>	: Approved Cables can be used on connections of fixed or mobile equipments which can be connected with hot surface. Can be used indoor, dry, wet, oily environments.
<b>Cross Section Size</b>	: 1,50mm <sup>2</sup> to 630mm <sup>2</sup>
<b>Product Description</b>	: According to manufacturer specifications
<b>Material Used</b>	: PCP or Equivalent Synthetic Elastomer Sheathed Flexible Cable Conductor: Electrolytic Stranded Copper, Bare or Tinned Class 5 Acc. To EN 60228 Separator: A Suitable Tape May be Applied Over The Conductor Insulation: EI4 Type Rubber (EPR) Compound Acc. To EN 50363-1 - Halogen free, Cross - linked Elastomeric Insulating Compounds Core Identification: Acc. to HD 308 Inner Sheath: EM2 or EM3 Type Elastomer Compound Acc. To EN 50363-2-1 - Halogen free, Cross - linked Elastomeric Sheathing Compounds Outer Sheath: EM2 Type Elastomer Compound Acc. To EN 50363-2-1 - Halogen free, Cross - linked Elastomeric Sheathing Compounds Colour: Black (Other Colors on Request)
<b>Rated Voltage</b>	: 450/750V
<b>Operating Temperature</b>	: -25 °C to +85 °C
<b>Application/Limitation</b>	: 1- Naval application are not covered by this type approval certificate 2- This cable are not to be used on permanent installation where in areas attended by passengers and in service areas acc. to TL Rule Part B Ch.5 Sec.14 F.2.1 3- This cable are not to be used on Location that Emergency services required to be operable under fire conditions mentioned in TL Rule Part B Ch.5 Sec.12 D15.1.3
<b>Type Approval Certificate Number</b>	: TO.DEB.19-0452
<b>Documentation</b>	: 1. H07RN-F: Sheathed Flexible Electrical Cable Type Approval Certificate Test Plan 2. TS EN 50525-2-21 Test Report, Report No.: 07.07.2021/601649, Issued By TSE, 31.01.2022 3. TS EN 60811-505 Test Report/EI4 Type Insulation, Report No.: 16.05.2019/287534, Issued By TSE, 04.07.2019 4. TS EN 60811-505 Test Report/EM2 Type Insulation, Report No.: 16.05.2019/287534, Issued By TSE, 04.07.2019 5. EN50363-1(EI4) Bending Test at Low Temperature Test Report, Report No.: T1904-R0-13/03/2019, Issued By ÜNTEL, 13.03.2019 6. EN50363-2-1(EM2) Bending Test at Low Temperature Test Report, Report No.: T1907-R0-13/03/2019, Issued By ÜNTEL, 13.03.2019 7. EN50289-4-17 Method B Before & After Ageing Test Report, Report No.: R-2022-11/2, Issued By ÜNTEL, 03.03.2022
<b>Performed Tests</b>	: Following Test have been carried out and found satisfactory; Quality Audit Visual Inspection and Dimensional Controls Marking Control Print Durability Control Mechanical Controls; -Tensile Strength and Elongation Change Tests Before Ageing Treatment -Tensile Strength and Elongation Change Tests After Ageing Treatment Thermal Effect Tests; -Hot Set Test -Cold Bending Test

Surveyor Name : Abdullah DEMİRCİ

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- Cold Impact Test  
Flame Retardant Tests  
Ozone Resistance Test  
Tear Resistance Test  
UV Resistance Test  
Oil Resistance Test  
Electrical Controls;  
-Conductor Resistance Test  
-High Voltage Test  
-Insulation Resistance Test

**Test Place** : ÜNTEL KABLOLARI SANAYİ VE TİCARET ANONİM ŞİRKETİ, Demirciler,  
Makine ve İmalat Sanayicileri Organize Sanayi Bölgesi, 6. Cadde No:4, 41455  
Dilovası/Kocaeli

**Marking of Product** : ÜNTEL, year of production, lot number, cable code, number of cores, cross section  
and standard.

**Last Inspection Date** : 02.01.2025

**Approval Conditions** : Approved cables can be used on connections of fixed or mobile equipments which  
can be connected with hot surfaces. Can be used indoor, outdoor, dry, wet, oily  
environments.

Surveyor Name : Abdullah DEMİRCİ

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