

# DATA CABLES FOR SHIPS



Quality Through Experience





# ABOUT US

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**ÜNTEL KABLO**, one of leading cable manufacturer in the world was established in 1972, Turkey. With almost 50 years of experience, continuously develops and optimize her product range with the help of advanced technology and well trained staff.

Product range consists over 15.000 different types of cables, covers both rubber and thermoplastic cables up to Medium Voltage (MV) range. ÜNTEL's power and instrumentation cables supplies energy for industries which requires experience like marine, offshore, mines and tunnels, airports, railways and have been used in industrial ways such as heavy-duty rubber drum reeling cables, welding cables, control cables and fire resistant cables. ÜNTEL is also able to produce tailor made products for special purposes. Today these products are exported over 70 countries on six continents.

By the end of 2009, ÜNTEL finalized the investment of a new high-tech plant near Istanbul. Now continues her operations on 43.000 m2 land space with 32.000 m2 closed area. By having 3.000 tons copper drawing and 4.000 tons different type of

compound processing capacity, ÜNTEL produces 30.000 tones of cable per year. By means of new factory building, state of the art machines and unique ERP system investments ÜNTEL aimed absolute customer satisfaction.

Üntel's laboratories which are approved by organisations that specify the standars are equipped with advanced technology test and measurement devices. Within the scope of Quality System Certificates there is a quality management system presents in Üntel according to ISO, IQnet and TSE quality standarts.. Around 200 different types of cables are certified by global organisations like VDE, KEMA, ABS, UL, BV, DNV-GL, RINA and TSE.

Üntel Kablo evaluate customer needs and expectations in a sectoral wiew and provide effective solutions with hundred percent customer satisfaction and qualified production philisopy. Üntel's biggest value is well trained and experienced staff and believe that exceptional quality comes through this experience.

# TYPE APPROVALS

## DATAMARIN CABLES



## POWER AND TELECOM CABLES



# EC600 SSTP FLEX HFFR

RoHS



CAT 7 S/FTP FLEX HFFR

## CABLE STRUCTURE

<b>Conductor</b>	7 x 0,22 mm Twisted Bare Copper
<b>Insulation</b>	Skin/Foam/Skin PE compound
<b>Pair Screen</b>	Al-Pet Foil around each pair
<b>Overall Screen</b>	Tinned Copper Wire Braiding
<b>Sheath</b>	Halogen free flame retardant compound (SHFI)

## TECHNICAL PROPERTIES

<b>Overall diameter</b>	Ø 8,70 ± 0,20 mm
<b>Cable Weight</b>	90 kg / km
<b>Min. Bending radius during draw in</b>	70 mm
<b>Min. Bending radius permanently installed</b>	35 mm
<b>Max. Tensile Strength</b>	90 N
<b>Min. Crush Resistance</b>	1000 N / 10 cm
<b>Installation Temperature</b>	0°C / +50°C
<b>Operating Temperature</b>	-20°C / +70°C
<b>Standarts</b>	IEC 61156-5, EN 50288-4-1, EN 50173-1, ISO/IEC 11801 2nd ed
<b>Flame Retardant</b>	IEC 60332-1-2, IEC 60332-3-24
<b>Halogen Free</b>	IEC 60684-2, IEC60754-1/2
<b>Low Smoke :</b>	IEC 61034-1/2



## ELECTRICAL PROPERTIES at 20°C

<b>Max. Conductor Resistance</b>	< 9.5 Ω / km
<b>Max. Resistance Unbalance</b>	< 2 %
<b>Min. Insulation Resistance</b>	5000 MΩ x m
<b>Mutual Capacitance</b>	< 56 pF / m
<b>Capacitance Unbalance</b>	1600 pF / km
<b>Impedance at 100 MHz</b>	100 ± 5 Ω
<b>Velocity of Propagation</b>	76%
<b>Delay Skew</b>	< 25 ns / 100 m
<b>Coupling Attenuation</b>	> 85 Db
<b>Transfer Impedance at 1 / 10 / 30 MHz</b>	< 10 / 10 / 30 mΩ / m
<b>Segregation Class</b>	D
<b>Test Voltage</b>	1000V
<b>Operating Voltage</b>	125V

## APPLICATIONS

IEEE 802.3: 10Base-T, 100Base-T, 1000Base-T, 10GBase-T, IEEE 802.5 16 MB, ISDN, TPDDI, ATM Power over Ethernet (PoE) / PoE+. These cables are used in data communication networks and for the transmission of digital and analogue voice, video and signals on ships.

# EC900 SSTP HFFR

RoHS



CAT 7 S/FTP HFFR

## CABLE STRUCTURE

<b>Conductor</b>	23 AWG Bare Copper
<b>Insulation</b>	Skin/Foam/Skin PE compound
<b>Pair Screen</b>	Al-Pet Foil around each pair
<b>Overall Screen</b>	Tinned Copper Wire Braiding
<b>Sheath</b>	Halogen free flame retardant compound (SHFI)

## TECHNICAL PROPERTIES

<b>Overall diameter</b>	Ø 7,30 ± 0,20 mm
<b>Cable Weight</b>	58 kg/km
<b>Min. Bending radius during draw in</b>	60 mm
<b>Min. Bending radius permanently installed</b>	30 mm
<b>Max. Tensile Strength</b>	90 N
<b>Min. Crush Resistance</b>	1000 N/10 cm
<b>Min. Impact</b>	10 Impacts
<b>Installation Temperature</b>	0°C / +50°C
<b>Operating Temperature</b>	-20°C / +70°C
<b>Standarts</b>	IEC 61156-5, EN 50288-4-1, EN 50173-1, ISO/IEC 11801 2nd ed
<b>Flame Retardant</b>	IEC 60332-1-2, IEC 60332-3-24
<b>Halogen Free</b>	IEC 60684-2, IEC 60754-1/2
<b>Low Smoke</b>	IEC 61034-1/2



## ELECTRICAL PROPERTIES at 20°C

<b>Max. Conductor Resistance</b>	< 9.5 Ω / km
<b>Max. Resistance Unbalance</b>	< 2 %
<b>Min. Insulation Resistance</b>	5000 MΩ x m
<b>Mutual Capacitance</b>	< 56 pF / m
<b>Capacitance Unbalance</b>	1600 pF / km
<b>Impedance at 100 MHz</b>	100 ± 5 Ω
<b>Velocity of Propagation</b>	76%
<b>Delay Skew</b>	< 25 ns / 100 m
<b>Coupling Attenuation</b>	> 80 Db
<b>Transfer Impedance at 1 / 10 / 30 MHz</b>	< 10 / 10 / 30 mΩ / m
<b>Segregation Class</b>	D
<b>Test Voltage</b>	1000 V
<b>Operating Voltage</b>	125 V

## APPLICATIONS

IEEE 802.3: 10Base-T, 100Base-T, 1000Base-T, 10GBase-T, IEEE 802.5 16 MB, ISDN, TPDDI, ATM Power over Ethernet (PoE) / PoE+. These cables are used in data communication networks and for the transmission of digital and analogue voice, video and signals on ships.

# EC400 SFTP HFFR

RoHS



CAT 6 SF/UTP HFFR

## CABLE STRUCTURE

<b>Conductor</b>	23 AWG Bare Copper
<b>Insulation</b>	PE compound
<b>Central Cross</b>	Halogen free separator
<b>Overall Screen</b>	Al-Pet Foil and Tinned Copper Wire Braiding
<b>Sheath</b>	Halogen free flame retardant compound (SHFI)

## TECHNICAL PROPERTIES

<b>Overall diameter</b>	Ø 7,10 ± 0,20 mm
<b>Cable Weight</b>	64 kg/km
<b>Min. Bending radius during draw in</b>	60 mm
<b>Min. Bending radius permanently installed</b>	30 mm
<b>Max. Tensile Strength</b>	90 N
<b>Min. Crush Resistance</b>	1000 N/10 cm
<b>Min. Impact</b>	10 Impacts
<b>Installation Temperature</b>	0°C / +50°C
<b>Operating Temperature</b>	- 20°C / +70°C
<b>Standarts</b>	IEC 61156-5, EN 50288-5-1, EN 50173-1, ISO/IEC 11801 2nd ed IEC 60332-1-2, IEC 60332-3-24
<b>Flame Retardant</b>	IEC 60684-2, IEC60754-1/2
<b>Halogen Free</b>	IEC 61034-1/2
<b>Low Smoke</b>	



## ELECTRICAL PROPERTIES at 20°C

<b>Max. Conductor Resistance</b>	< 9.5 Ω / km
<b>Max. Resistance Unbalance</b>	< 2 %
<b>Min. Insulation Resistance</b>	5000 MΩ x m
<b>Mutual Capacitance</b>	< 60 pF / m
<b>Capacitance Unbalance</b>	1600 pF / km
<b>Impedance at 100 MHz</b>	100 ± 5 Ω
<b>Velocity of Propagation</b>	66 %
<b>Delay Skew</b>	< 45 ns / 100 m
<b>Coupling Attenuation</b>	> 70 Db
<b>Transfer Impedance at 1 / 10 / 30 MHz</b>	< 10 / 10 / 30 mΩ / m
<b>Segregation Class</b>	C
<b>Test Voltage</b>	1000 V
<b>Operating Voltage</b>	125 V

## APPLICATIONS

IEEE 802.3: 10Base-T, 100Base-T, 1000Base-T, IEEE 802.5 16 MB, ISDN, TPDDI, ATM Power over Ethernet (PoE) / PoE+. These cables are used in data communication networks and for the transmission of digital and analogue voice, video and signals on ships.

# EC200 SFTP HFFR

RoHS



CAT 5e SF/UTP HFFR

## CABLE STRUCTURE

<b>Conductor</b>	24 AWG Bare Copper
<b>Insulation</b>	PE compound
<b>Overall Screen</b>	Al-Pet Foil and Tinned Copper Wire Braiding
<b>Sheath</b>	Halogen free flame retardant compound (SHFI)

## TECHNICAL PROPERTIES

<b>Overall diameter</b>	Ø 6,20 ± 0,20 mm
<b>Cable Weight</b>	48 kg/km
<b>Min. Bending radius during draw in</b>	50 mm
<b>Min. Bending radius permanently installed</b>	25 mm
<b>Max. Tensile Strength</b>	90 N
<b>Min. Crush Resistance</b>	1000 N/10 cm
<b>Min. Impact</b>	10 Impacts
<b>Installation Temperature</b>	0°C / +50°C
<b>Operating Temperature</b>	- 20°C / +70°C
<b>Standarts</b>	IEC 61156-5, EN 50288-2-1, EN 50173-1, ISO/IEC 11801 2nd ed IEC 60332-1-2, IEC 60332-3-24
<b>Flame Retardant</b>	
<b>Halogen Free</b>	IEC 60684-2, IEC60754-1/2
<b>Low Smoke</b>	IEC 61034-1/2

## ELECTRICAL PROPERTIES at 20°C

<b>Max. Conductor Resistance</b>	< 9.5 Ω / km
<b>Max. Resistance Unbalance</b>	< 2 %
<b>Min. Insulation Resistance</b>	5000 MΩ x m
<b>Mutual Capacitance</b>	< 60 pF / m
<b>Capacitance Unbalance</b>	1600 pF / km
<b>Impedance at 100 MHz</b>	100 ± 5 Ω
<b>Velocity of Propagation</b>	66 %
<b>Delay Skew</b>	< 45 ns / 100 m
<b>Test Voltage</b>	1000 V
<b>Operating Voltage</b>	125 V



## APPLICATIONS

IEEE 802.3: 10Base-T, 100Base-T, 1000Base-T, IEEE 802.5 16 MB, ISDN, TPDDI, ATM Power over Ethernet (PoE) / PoE+. These cables are used in data communication networks with 200 MHz bandwidth capacity. And for the transmission of digital and analogue voice, video and signals on ships.

**OFFSHORE  
CABLES**



**AIRPORT  
CABLES**



**CRANE  
CABLES**



**MINING  
CABLES**



**DEFENSE  
INDUSTRY  
CABLES**



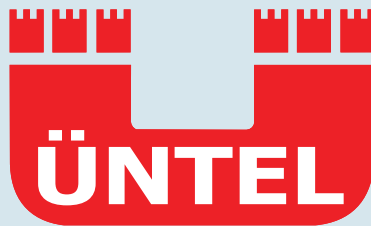
**MARINE  
CABLES**

**RAILWAY  
CABLES**

**INDUSTRIAL  
CABLES**

**TUNNELLING  
CABLES**

**INSTRUMENTATION  
CABLES**



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