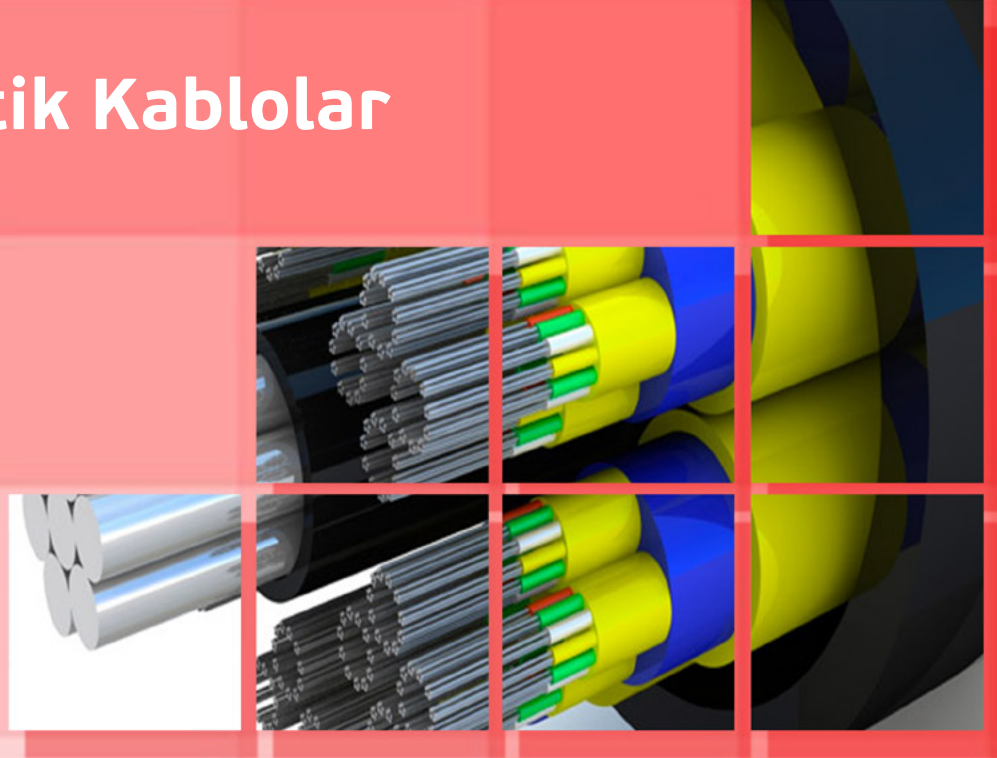




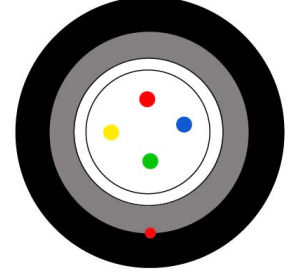
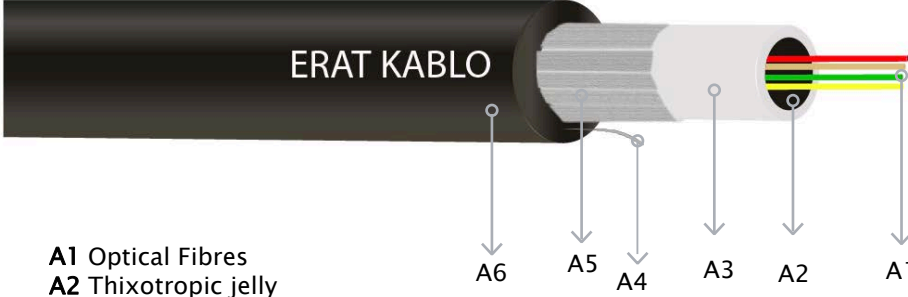
Data Sheet

Fiber Optik Kablolar



0.(352) 322 27 70
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4 Core SM SLT SJNMA F/O Cable



- A1 Optical Fibres
- A2 Thixotropic jelly
- A3 Loose Tube
- A4 Glass Yarns
- A5 Ripcord
- A6 Outer Jacket HFFR



Ürünleriniz Güvenli Bir Şekilde
Sevkiyata Hazırlanır

Marka/Model : EK-TSFA2SJNMAHFR3-004

Türksat Onay Kodu : TKS-FOM-114

Physical Description



- 4 fibers non armored fiber optic cable,
- Thixotropic jelly filled loose tubes,
- Central loose tube design,
- Glass Yarn as strength elements,
- Outer jacket is made of low smoke zero halogen,
- Ripcords are inserted for easy jackets removal.

Physical Specifications

Fiber Type	SM G652 D
Tube material	PBT (Polybutylene Terephthalate)
Color of loose tube	Natural
Color of fibers in per tube	Red, Yellow, Green, Natural
Tube filling compound	Thixotropic jelly
Core filling compound	-
Strength elements	Glass yarn
Ripcord	Aramid or polyester cord
Identification tape marking	As a customer request
Outer jacket	HFFR/LSZH, thickness nominal ≥ 1.1
Surface marking	As a customer request



SPECIFICATIONS

Fiber Count	Tube Outer/Inner Diameter (mm)	Cable Diameter (mm)	Cable Weight (kg/km)
4	3.0±0.1/2.0±0.2	6.2±0.5	60±%10

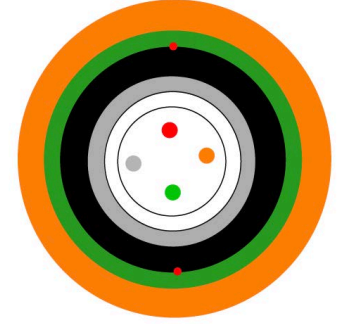
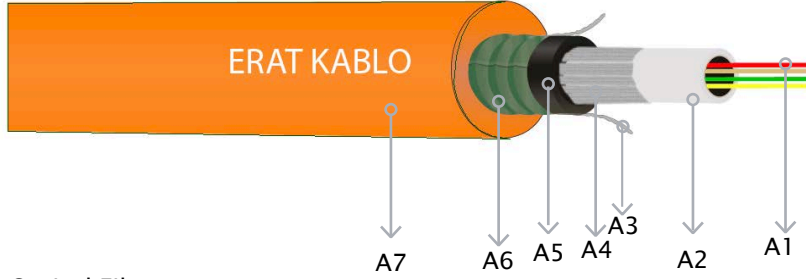
Mechanical and Environmental Properties

Physical tests	Value	Requirement	Standard
Tensile Strength	1200 N (during installation) 900 N (during operation)	Max. loss:0.05 dB	IEC 60794-1-2-E1
Impact Resistance	5 N.m, 3 impacts	No fiber break	IEC 60794-1-2-E4
Crush Resistance	1500 N/100mm	No fiber break	IEC 60794-1-2-E3
Temperature Cycling	-40 to +70 °C	Maximum loss:0.05 dB	IEC 60794-1-2-F1
Bend Radius (during installation)	20x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-2-E11
Bend Radius (during Service)	15x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-2-E11
Repeating Bending	20xcable diameter between	Maximum loss:0.05 dB	IEC 60794-1-E6
Water Penetration	1 m length in 24 hour	No water leak	IEC 60794-1-2-F5

STANDARD SM FIBER ITU-T G 652 D

FPROPERTIES	SPECIFIED VALUES
Attenuation (max.)	0.36 dB/km (1310 nm) 0.22 dB/km (1550 nm)
MFD	9.2±0.4 µm(1310 nm) 10.4±0.5 µm(1550 nm)
Chromatic Dispersion (max)	3.5 ps/(nmxkm) (1310 nm) 18 ps/(nmxkm) (1550 nm)
Cladding diameter	125±0.3µm
Core/Clad Concentricity error	≤ 0.5 µm
Zero dispersion wavelength	1300nm≤ ≤1324nm
Cladding non-circularity (max)	≤ 0.7 %
Coating diameter	245±10 µm
Cut Off Wavelength	≤1260nm
Proof Test strain	≥ 1% (100kpsi or 0.7GPa)

4 Core SM SLT DJSA F/O Cable



A1 Optical Fibres
A2 Loose Tube
A3 Glass Yarns
A4 Ripcord
A5 Inner Jacket PE

A6 Corrugated Steel Tape
A7 Outer Jacket PE



Ürünleriniz Güvenli Bir Şekilde
Sevkiyata Hazırlanır

Marka/Model : EK-TSF92DJCSAPE3-004

Türksat Onay Kodu : TKS-FOM-35

Physical Description



4 fibers armored fiber optic cable,
Thixotropic jelly filled loose tubes,
Central loose tube design,
Jelly filled core,
Glass yarn as strength elements,
Inner jacket is made of low density polyethylene, Corrugated steel tape armor,
Outer jacket is made of medium density polyethylene, Ripcords are inserted for easy jackets removal.

Physical Specifications

Fiber Type	SM G652 D
Tube material	PBT (Polybutylene Terephthalate)
Color of loose tube	Natural
Color of fibers in per tube	Red, Yellow, Green, Natural
Tube filling compound	Thixotropic jelly
Tape wrap	-
Strength elements	Glass yarn
Ripcord	Aramid or polyester cord
Identification tape marking	As a customer request
Inner jacket	Black LDPE, thickness nominal ≥ 1.5 mm
Armor	Corrugated steel tape
Outer jacket	UV Resistant Orange MDPE, thickness nominal 1.8 ± 0.2 mm. (with armor)
Surface marking	As a customer request



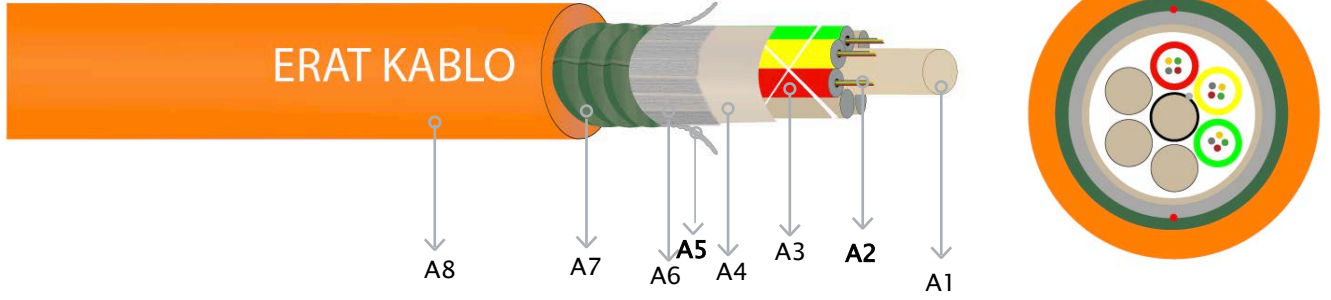
SPECIFICATIONS			
Fiber Count	Tube Outer/Inner Diameter (mm)	Cable Diameter (mm)	Cable Weight (kg/km)
4	3.0±0.1/2.0±0.2	10.8±0.5	105*

*Tolerance is ±10%

Mechanical and Environmental Properties			
Physical tests	Value	Requirement	Standard
Tensile Strength	1200 N (during installation) 900 N (during operation)	Max. loss:0.05 dB	IEC 60794-1-2-E1
Impact Resistance	5 N.m, 3 impacts	No fiber break	IEC 60794-1-2-E4
Crush Resistance	1500 N/100mm	No fiber break	IEC 60794-1-2-E3
Temperature Cycling	-40 to +70 °C	Maximum loss:0.05 dB	IEC 60794-1-2-F1
Bend Radius (during installation)	20x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-2-E11
Bend Radius (during Service)	15x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-2-E11
Repeating Bending	20xcable diameter between	Maximum loss:0.05 dB	IEC 60794-1-E6
Water Penetration	1 m length in 24 hour	No water leak	IEC 60794-1-2-F5

STANDARD SM FIBER ITU-T G 652 D	
FPROPERTIES	SPECIFIED VALUES
Attenuation (max.)	0.36 dB/km (1310 nm) 0.22 dB/km (1550 nm)
MFD	9.2±0.4 μm(1310 nm) 10.4±0.5 μm(1550 nm)
Chromatic Dispersion (max)	3.5 ps/(nmxkm) (1310 nm) 18 ps/(nmxkm) (1550 nm)
Cladding diameter	125±0.3μm
Core/Clad Concentricity error	≤ 0.5 μm
Zero dispersion wavelength	1300nm≤ ≤1324nm
Cladding non-circularity (max)	≤ 0.7 %
Coating diameter	245±10 μm
Cut Off Wavelength	≤1260nm
Proof Test strain	≥ 1% (100kpsi or 0.7GPa)

12 Core SM MLT SJSA F/O Cable



A1 Central Member
A2 Optical Fiber
A3 Loose Tube
A4 Water swellable tape

A5 Ripcord
A6 Glass Yarn
A7 Corrugated Steel Tape
A8 Outer Jacket PE



Ürünleriniz Güvenli Bir Şekilde
Sevkiyata Hazırlanır

Marka/Model : EK-TSF92MSJSAPE3-012

Türksat Onay Kodu :TKS-FOM-01

Physical Description



- 12 fibers armored outdoor fiber optic cable,
- Thixotropic jelly filled loose tubes,
- Loose tubes and filler (if any) are SZ stranded around the non-metallic central strength member (FRP),
- Dry core
- Glass yarn as strength elements,
- Corrugated steel armor,
- Outer jacket is made of medium density polyethylene,
- Ripcord is inserted for easy jackets removal.

Physical Specifications

Physical Specifications	
Fiber Type	SM G652 D
Central strength member	All-dielectric FRP
Tube material	PBT (Polybutylene Terephthalate)
Color of loose tubes	Red, Yellow, Green, Natural, Natural, Natural
Color of fibers in per tube	Red, Yellow, Green, Blue, Violet, Brown, Black, Orange, Pink, Gray, Aqua, Natural
Tube filling compound	Thixotropic jelly
Core filling compound	-
Tape wrap	Water swellable tape
Strength elements	Glass yarns
Ripcord	Aramid or polyester cord
Identification tape marking	As a customer request
Inner jacket	-
Surface marking	As a customer request
Armor	Corrugated steel tape
Outer jacket	Orange MDPE, thickness nominal 1.8±0.2 mm. (with armor)



TURKSAT

SPECIFICATIONS

Fiber Count	Number of Tube	Number of Filler	Number of fiber in per tube	Central Strength Member OD (mm)	Central strength member coated OD (mm)	Tube Outer/Inner Diameter (mm)	Cable Diameter (mm)	Cable Weight (kg/km)
12	3	3	4	2.1	N/A	2.1±0.1/1.4±0.2	12.0±0.5	163*

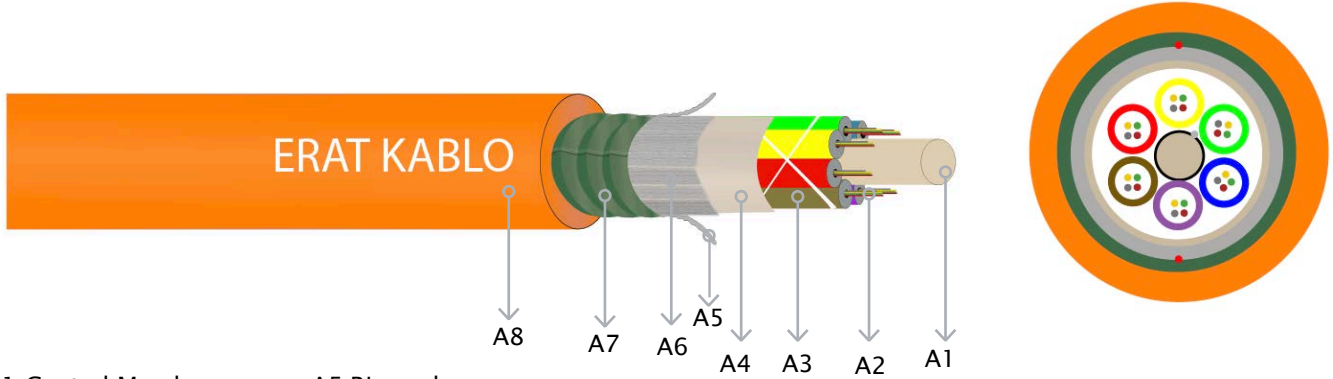
Mechanical and Environmental Properties

Physical tests	Conditions	Requirement	Standard
Tensile Strength (for 24-48 fibers)	3500 N (during Installation) 2100 N (during Operation)	Maximum fiber strain: %0.33	IEC 60794-1-E1
Impact Resistance	30Nm , 3 impacts , 300mm	No fiber break	IEC 60794-1-E1
Crush Resistance	4000 N/10cm	No fiber break	IEC 60794-1-E3
Temperature Cycling	-40 to +70 °C	Maximum loss:0.05 dB	IEC 60794-1-F1
Bend Radius (during installation)	20x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Bend Radius (during Service)	10x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Repeating Bending	20xcable diameter between	Maximum loss:0.05 dB	IEC 60794-1-E6
Water Penetration	1 m length in 24 hour	No water leak	IEC 60794-1-F5
Operation Temperature	-40 to +70 °C		
Storage and Transportation Temperature	-40 to +70 °C		
Installation Temperature	-20 to +60 °C		

STANDARD SM FIBER ITU-T G 652 D

FPROPERTIES	SPECIFIED VALUES
Attenuation (max.)	0.36 dB/km (1310 nm) 0.22 dB/km (1550 nm)
MFD	9.2±0.4 µm(1310 nm) 10.3±0.5 µm(1550 nm)
Chromatic Dispersion (max)	3.5 ps/(nmxkm) (1310 nm) 17 ps/(nmxkm) (1550 nm)
Cladding diameter	125±0.3µm
Core Concentricity error (max)	0.6 µm
Zero dispersion wavelength	1300nm ≤ ≤1324nm
Cladding non-circularity (max)	%1
Coating diameter	250±10 µm
Cut Off Wavelength	≤1260nm
Proof Test	8.4 N
Proof Test strain	%1.00

24 Core SM MLT SJSA F/O Cable



- A1 Central Member
- A2 Optical Fiber
- A3 Loose Tube
- A4 Water swellable tape
- A5 Ripcord
- A6 Glass Yarn
- A7 Corrugated Steel Tape
- A8 Outer Jacket PE



Ürünleriniz Güvenli Bir Şekilde
Sevkiyata Hazırlanır

Marka/Model : EK-TSF92MSJSAPE3-024

Türksat Onay Kodu : TKS-FOM-02

Physical Description



- 24 fibers armored outdoor fiber optic cable,
- Thixotropic jelly filled loose tubes,
- Loose tubes and filler (if any) are SZ stranded around the non-metallic central strength member (FRP),
- Dry core,
- Glass yarn as strength elements,
- Corrugated steel armor,
- Outer jacket is made of medium density polyethylene,
- Ripcord is inserted for easy jackets removal.

Physical Specifications

Fiber Type	SM G652 D
Central strength member	All-dielectric FRP
Tube material	PBT (Polybutylene Terephthalate)
Color of loose tubes	Red, Yellow, Green , Blue, Violet, White
Color of fibers in per tube	Red, Yellow, Green , Natural
Tube filling compound	Thixotropic jelly
Core filling compound	-
Tape wrap	Water swellable tape
Strength elements	Glass yarns
Ripcord	Aramid or polyester cord
Identification tape marking	As a customer request
Inner jacket	-
Surface marking	As a customer request
Armor	Corrugated steel tape
Outer jacket	Orange MDPE, thickness nominal 1.8±0.2 mm. (with armor)



TURKSAT

SPECIFICATIONS

Fiber Count	Number of Tube	Number of Filler	Number of fiber in per tube	Central Strength Member OD (mm)	Central strength member coated OD (mm)	Tube Outer/Inner Diameter (mm)	Cable Diameter (mm)	Cable Weighth (kg/km)
24	6	-	4	2.1	N/A	2.1±0.1/1.4±0.2	12.0±0.5	165*

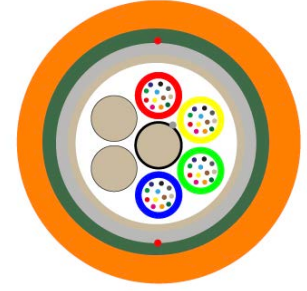
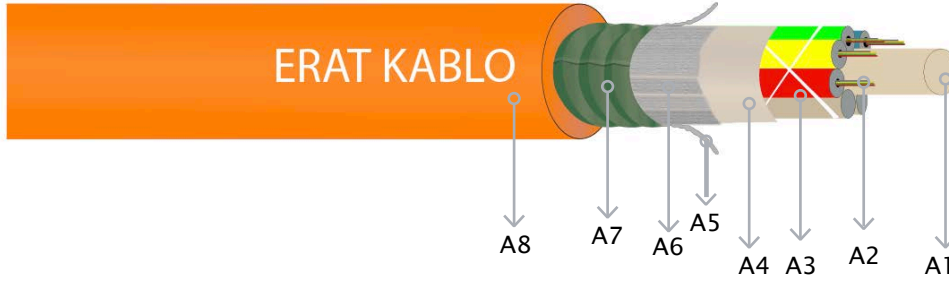
Mechanical and Environmental Properties

Physical tests	Conditions	Requirement	Standard
Tensile Strength (for 24-48 fibers)	3500 N (during Installation) 2100 N (during Operation)	Maximum fiber strain: %0.33	IEC 60794-1-E1
Impact Resistance	30Nm , 3 impacts , 300mm	No fiber break	IEC 60794-1-E1
Crush Resistance	4000 N/10cm	No fiber break	IEC 60794-1-E3
Temperature Cycling	-40 to +70 °C	Maximum loss:0.05 dB	IEC 60794-1-F1
Bend Radius (during installation)	20x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Bend Radius (during Service)	10x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Repeating Bending	20xcable diameter between	Maximum loss:0.05 dB	IEC 60794-1-E6
Water Penetration	1 m length in 24 hour	No water leak	IEC 60794-1-F5
Operation Temperature	-40 to +70 °C		
Storage and Transportation Temperature	-40 to +70 °C		
Installation Temperature	-20 to +60 °C		

STANDARD SM FIBER ITU-T G 652 D

FPROPERTIES	SPECIFIED VALUES
Attenuation (max.)	0.36 dB/km (1310 nm) 0.22 dB/km (1550 nm)
MFD	9.2±0.4 μm(1310 nm) 10.3±0.5 μm(1550 nm)
Chromatic Dispersion (max)	3.5 ps/(nmxkm) (1310 nm) 17 ps/(nmxkm) (1550 nm)
Cladding diameter	125±0.3μm
Core Concentricity error (max)	0.6 μm
Zero dispersion wavelength	1300nm≤ ≤1324nm
Cladding non-circularity (max)	%1
Coating diameter	250±10 μm
Cut Off Wavelength	≤1260nm
Proof Test	8.4 N
Proof Test strain	%1.00

48 Core SM MLT SJSA F/O Cable



- A1 Central Member
- A2 Optical Fiber
- A3 Loose Tube
- A4 Water swellable tape
- A5 Ripcord
- A6 Glass Yarn
- A7 Corrugated Steel Tape
- A8 Outer Jacket PE



Ürünleriniz Güvenli Bir Şekilde
Sevkiyata Hazırlanır

Marka/Model : EK-TSF92MSJSAPE3-048
Türksat Onay Kodu : TKS-FOM-37

Physical Description



- 48 fibers armored outdoor fiber optic cable,
- Thixotropic jelly filled loose tubes,
- Loose tubes and filler (if any) are SZ stranded around the non-metallic central strength member (FRP),
- Dry core,
- Glass yarn as strength elements,
- Corrugated steel armor,
- Outer jacket is made of medium density polyethylene,
- Ripcord is inserted for easy jackets removal.

Physical Specifications

Fiber Type	SM G652 D
Central strength member	All-dielectric FRP
Tube material	PBT (Polybutylene Terephthalate)
Color of loose tubes	Red, Yellow, Green , Blue, Natural, Natural
Color of fibers in per tube	Red, Yellow, Green , Blue, Violet, Brown, Black, Orange, Pink, Gray, Aqua, Natural
Tube filling compound	Thixotropic jelly
Core filling compound	-
Tape wrap	Water swellable tape
Strength elements	Glass yarns
Ripcord	Aramid or polyester cord
Identification tape marking	As a customer request
Inner jacket	-
Surface marking	As a customer request
Armor	Corrugated steel tape
Outer jacket	Orange MDPE, thickness nominal 1.8±0.2 mm. (with armor)



SPECIFICATIONS

Fiber Count	Number of Tube	Number of Filler	Number of fiber in per tube	Central Strength Member OD (mm)	Central strength member coated OD (mm)	Tube Outer/Inner Diameter (mm)	Cable Diameter (mm)	Cable Weight (kg/km)
48	4	2	12	2.5	N/A	2.2±0.1 /1.5±0.2	12.6±0.5	193*

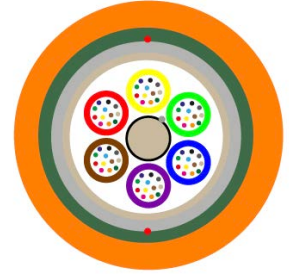
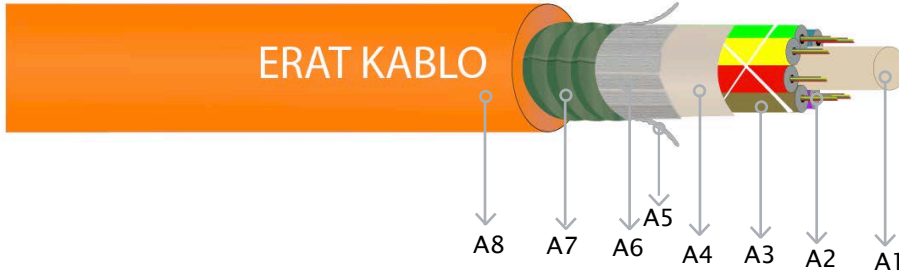
Mechanical and Environmental Properties

Physical tests	Conditions	Requirement	Standard
Tensile Strength (for 24-48 fibers)	3500 N (during Installation) 2100 N (during Operation)	Maximum fiber strain: %0.33	IEC 60794-1-E1
Impact Resistance	30Nm , 3 impacts , 300mm	No fiber break	IEC 60794-1-E1
Crush Resistance	4000 N/10cm	No fiber break	IEC 60794-1-E3
Temperature Cycling	-40 to +70 °C	Maximum loss:0.05 dB	IEC 60794-1-F1
Bend Radius (during installation)	20x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Bend Radius (during Service)	10x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Repeating Bending	20xcable diameter between	Maximum loss:0.05 dB	IEC 60794-1-E6
Water Penetration	1 m length in 24 hour	No water leak	IEC 60794-1-F5
Operation Temperature	-40 to +70 °C		
Storage and Transportation Temperature	-40 to +70 °C		
Installation Temperature	-20 to +60 °C		

STANDARD SM FIBER ITU-T G 652 D

FPROPERTIES	SPECIFIED VALUES
Attenuation (max.)	0.36 dB/km (1310 nm) 0.22 dB/km (1550 nm)
MFD	9.2±0.4 μm(1310 nm) 10.3±0.5 μm(1550 nm)
Chromatic Dispersion (max)	3.5 ps/(nmxkm) (1310 nm) 17 ps/(nmxkm) (1550 nm)
Cladding diameter	125±0.3μm
Core Concentricity error (max)	0.6 μm
Zero dispersion wavelength	1300nm≤ ≤1324nm
Cladding non-circularity (max)	%1
Coating diameter	250±10 μm
Cut Off Wavelength	≤1260nm
Proof Test	8.4 N
Proof Test strain	%1.00

72 Core SM MLT SJSA F/O Cable



- A1 Central Member
- A2 Optical Fiber
- A3 Loose Tube
- A4 Water swellable tape
- A5 Ripcord
- A6 Glass Yarn
- A7 Corrugated Steel Tape
- A8 Outer Jacket PE



Ürünleriniz Güvenli Bir Şekilde
Sevkiyata Hazırlanır

Marka/Model : EK-TSF92MSJSAPE3-072
Türksat Onay Kodu : TKS-FOM-38

Physical Description



- 72 fibers armored outdoor fiber optic cable,
- Thixotropic jelly filled loose tubes,
- Loose tubes and filler (if any) are SZ stranded around the non-metallic central strength member (FRP),
- Dry Core
- Glass yarn as strength elements,
- Corrugated steel armor,
- Outer jacket is made of medium density polyethylene,
- Ripcord is inserted for easy jackets removal.

Physical Specifications

Physical Specifications	
Fiber Type	SM G652 D
Central strength member	All-dielectric FRP
Tube material	PBT (Polybutylene Terephthalate)
Color of loose tubes	Red, Yellow, Green , Blue, Violet, Brown
Color of fibers in per tube	Red, Yellow, Green , Blue, Violet, Brown, Black, Orange, Pink, Gray, Aqua, Natural
Tube filling compound	Thixotropic jelly
Core filling compound	-
Tape wrap	Water swellable tape
Strength elements	Glass yarns
Ripcord	Aramid or polyester cord
Identification tape marking	As a customer request
Inner jacket	-
Surface marking	As a customer request
Armor	Corrugated steel tape
Outer jacket	Orange MDPE, thickness nominal 1.8±0.2 mm. (with armor)



TURKSAT

SPECIFICATIONS

Fiber Count	Number of Tube	Number of Filler	Number of fiber in per tube	Central Strength Member OD (mm)	Central strength member coated OD (mm)	Tube Outer/Inner Diameter (mm)	Cable Diameter (mm)	Cable Weight (kg/km)
72	6	-	12	2.5	N/A	2.2±0.1 / 1.5±0.2	12.6±0.5	193*

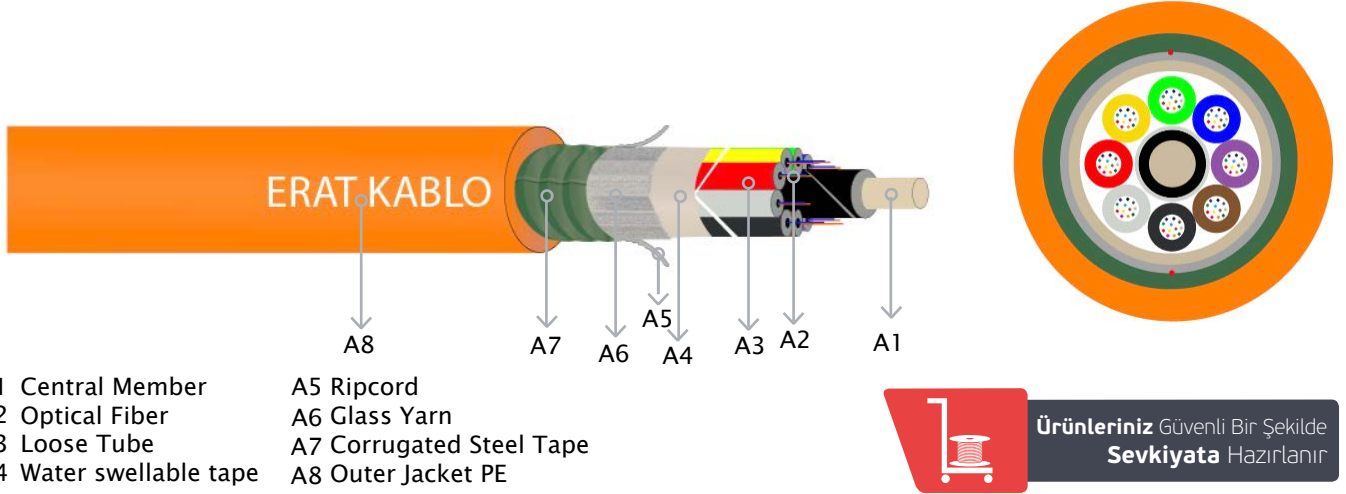
Mechanical and Environmental Properties

Physical tests	Conditions	Requirement	Standard
Tensile Strength (for 24-48 fibers)	3500 N (during Installation) 2100 N (during Operation)	Maximum fiber strain: %0.33	IEC 60794-1-E1
Impact Resistance	30Nm , 3 impacts , 300mm	No fiber break	IEC 60794-1-E1
Crush Resistance	4000 N/10cm	No fiber break	IEC 60794-1-E3
Temperature Cycling	-40 to +70 °C	Maximum loss:0.05 dB	IEC 60794-1-F1
Bend Radius (during installation)	20x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Bend Radius (during Service)	10x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Repeating Bending	20xcable diameter between	Maximum loss:0.05 dB	IEC 60794-1-E6
Water Penetration	1 m length in 24 hour	No water leak	IEC 60794-1-F5
Operation Temperature	-40 to +70 °C		
Storage and Transportation Temperature	-40 to +70 °C		
Installation Temperature	-20 to +60 °C		

STANDARD SM FIBER ITU-T G 652 D

FPROPERTIES	SPECIFIED VALUES
Attenuation (max.)	0.36 dB/km (1310 nm) 0.22 dB/km (1550 nm)
MFD	9.2±0.4 µm(1310 nm) 10.3±0.5 µm(1550 nm)
Chromatic Dispersion (max)	3.5 ps/(nmxkm) (1310 nm) 17 ps/(nmxkm) (1550 nm)
Cladding diameter	125±0.3µm
Core Concentricity error (max)	0.6 µm
Zero dispersion wavelength	1300nm ≤ ≤1324nm
Cladding non-circularity (max)	%1
Coating diameter	250±10 µm
Cut Off Wavelength	≤1260nm
Proof Test	8.4 N
Proof Test strain	%1.00

96 Core SM MLT SJSA F/O Cable



A1 Central Member
A2 Optical Fiber
A3 Loose Tube
A4 Water swellable tape

A5 Ripcord
A6 Glass Yarn
A7 Corrugated Steel Tape
A8 Outer Jacket PE



Ürünleriniz Güvenli Bir Şekilde
Sevkiyata Hazırlanır

Marka/Model : EK-TSF92MSJSAPE3-096

Türksat Onay Kodu : TKS-FOM-03

❖ Physical Description



- ▶ 96 fibers armored outdoor fiber optic cable,
- ▶ Thixotropic jelly filled loose tubes,
- ▶ Loose tubes and filler (if any) are SZ stranded around the non-metallic central strength member (FRP),
- ▶ Dry core,
- ▶ Glass yarn as strength elements,
- ▶ Corrugated steel armor,
- ▶ Outer jacket is made of medium density polyethylene,
- ▶ Ripcord is inserted for easy jackets removal.

Physical Specifications

Fiber Type	SM G652 D
Central strength member	All-dielectric FRP
Tube material	PBT (Polybutylene Terephthalate)
Color of loose tubes	Red, Yellow, Green , Blue, Violet, Brown, Black, White
Color of fibers in per tube	Red, Yellow, Green , Blue, Violet, Brown, Black, Orange, Pink, Gray, Aqua, Natural
Tube filling compound	Thixotropic jelly
Core filling compound	-
Tape wrap	Water swellable tape
Strength elements	Glass yarns
Ripcord	Aramid or polyester cord
Identification tape marking	As a customer request
Inner jacket	-
Surface marking	As a customer request
Armor	Corrugated steel tape
Outer jacket	Orange MDPE, thickness nominal 1.8±0.2 mm. (with armor)



TURKSAT

SPECIFICATIONS

Fiber Count	Number of Tube	Number of Filler	Number of fiber in per tube	Central Strength Member OD (mm)	Central strength member coated OD (mm)	Tube Outer/Inner Diameter (mm)	Cable Diameter (mm)	Cable Weigh (kg/km)
96	8	-	12	2.5	3.7*	2.2±0.1 /1.5±0.2	14.0±0.5	238*

Mechanical and Environmental Properties

Physical tests	Conditions	Requirement	Standard
Tensile Strength (for 24-48 fibers)	3500 N (during Installation) 2100 N (during Operation)	Maximum fiber strain: %0.33	IEC 60794-1-E1
Impact Resistance	30Nm , 3 impacts , 300mm	No fiber break	IEC 60794-1-E1
Crush Resistance	4000 N/10cm	No fiber break	IEC 60794-1-E3
Temperature Cycling	-40 to +70 °C	Maximum loss:0.05 dB	IEC 60794-1-F1
Bend Radius (during installation)	20x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Bend Radius (during Service)	10x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Repeating Bending	20xcable diameter between	Maximum loss:0.05 dB	IEC 60794-1-E6
Water Penetration	1 m length in 24 hour	No water leak	IEC 60794-1-F5
Operation Temperature	-40 to +70 °C		
Storage and Transportation Temperature	-40 to +70 °C		
Installation Temperature	-20 to +60 °C		

STANDARD SM FIBER ITU-T G 652 D

FPROPERTIES	SPECIFIED VALUES
Attenuation (max.)	0.36 dB/km (1310 nm) 0.22 dB/km (1550 nm)
MFD	9.2±0.4 µm(1310 nm) 10.3±0.5 µm(1550 nm)
Chromatic Dispersion (max)	3.5 ps/(nmxkm) (1310 nm) 17 ps/(nmxkm) (1550 nm)
Cladding diameter	125±0.3µm
Core Concentricity error (max)	0.6 µm
Zero dispersion wavelength	1300nm≤ ≤1324nm
Cladding non-circularity (max)	%1
Coating diameter	250±10 µm
Cut Off Wavelength	≤1260nm
Proof Test	8.4 N
Proof Test strain	%1.00

SPECIFICATIONS

Fiber Count	Number of Tube	Number of Filler	Number of fiber in per tube	Central Strength Member OD (mm)	Central strength member coated OD (mm)	Tube Outer/Inner Diameter (mm)	Cable Diameter (mm)	Cable Weight (kg/km)
144	12	-	12	2.5	6.5	2.2±0.1 /1.5±0.2	17.0±0.5	335*

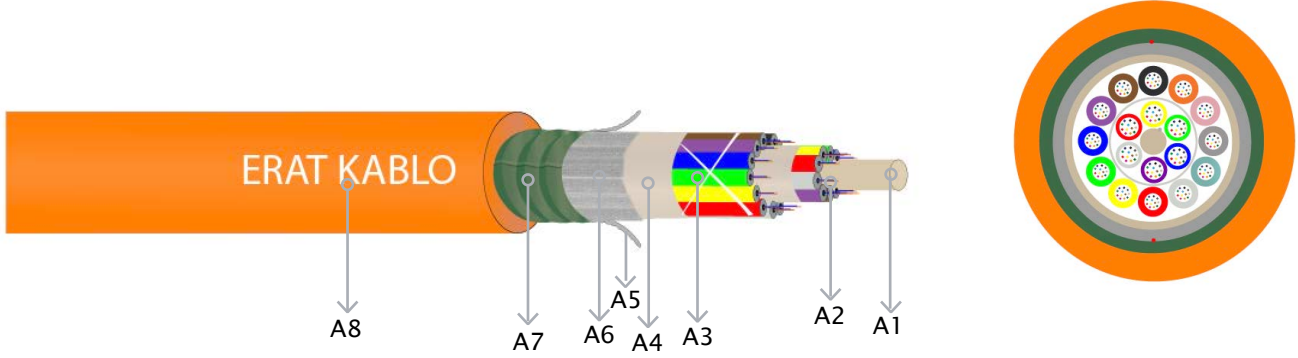
Mechanical and Environmental Properties

Physical tests	Conditions	Requirement	Standard
Tensile Strength (for 24-48 fibers)	3500 N (during Installation) 2100N (during Operation)	Maximum fiber strain: %0.33	IEC 60794-1-E1
Impact Resistance	30Nm , 3 impacts , 300mm	No fiber break	IEC 60794-1-E1
Crush Resistance	4000 N/10cm	No fiber break	IEC 60794-1-E3
Temperature Cycling	-40 to +70 °C	Maximum loss:0.05 dB	IEC 60794-1-F1
Bend Radius (during installation)	20x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Bend Radius (during Service)	10x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Repeating Bending	20xcable diameter between	Maximum loss:0.05 dB	IEC 60794-1-E6
Water Penetration	1 m length in 24 hour	No water leak	IEC 60794-1-F5
Operation Temperature	-40 to +70 °C		
Storage and Transportation Temperature	-40 to +70 °C		
Installation Temperature	-20 to +60 °C		

STANDARD SM FIBER ITU-T G 652 D

FPROPERTIES	SPECIFIED VALUES
Attenuation (max.)	0.36 dB/km (1310 nm) 0.22 dB/km (1550 nm)
MFD	9.2±0.4 μm(1310 nm) 10.3±0.5 μm(1550 nm)
Chromatic Dispersion (max)	3.5 ps/(nmxkm) (1310 nm) 17 ps/(nmxkm) (1550 nm)
Cladding diameter	125±0.3μm
Core Concentricity error (max)	0.6 μm
Zero dispersion wavelength	1300nm≤ ≤1324nm
Cladding non-circularity (max)	%1
Coating diameter	250±10 μm
Cut Off Wavelength	≤1260nm
Proof Test	8.4 N
Proof Test strain	%1.00

216 Core SM MLT SJSA F/O Cable



- A1 Central Member
A2 Optical Fiber
A3 Loose Tube
A4 Water swellable tape
A5 Ripcord
A6 Glass Yarn
A7 Corrugated Steel Tape
A8 Outer Jacket PE



Ürünleriniz Güvenli Bir Şekilde
Sevkiyata Hazırlanır

Marka/Model : EK-TSF92MSJSAPE3-216
Türksat Onay Kodu : TKS-FOM-04

Physical Description

- 216 fibers armored outdoor fiber optic cable,
- Thixotropic jelly filled loose tubes,
- Loose tubes and filler (if any) are SZ stranded around the non-metallic central strength member (FRP),
- Dry core,
- Glass yarn as strength elements,
- Corrugated steel armor,
- Outer jacket is made of medium density polyethylene,
- Ripcord is inserted for easy jackets removal.



Physical Specifications

Physical Specifications	
Fiber Type	SM G652 D
Central strength member	All-dielectric FRP
Tube material	PBT (Polybutylene Terephthalate)
Color of loose tubes	Red, Yellow, Green , Blue, Violet,White/ Red, Yellow, Green , Blue, Violet,Brown, Black, Orange, Pink
Color of fibers in per tube	Red, Yellow, Green , Blue, Violet, Brown, Black, Orange, Pink, Gray, Aqua, Natural
Tube filling compound	Thixotropic jelly
Core filling compound	-
Tape wrap	Water swellable tape
Strength elements	Glass yarns
Ripcord	Aramid or polyester cord
Identification tape marking	As a customer request
Inner jacket	-
Surface marking	As a customer request
Armor	Corrugated steel tape
Outer jacket	Orange MDPE, thickness nominal 1.8±0.2 mm. (with armor)



TURKSAT

SPECIFICATIONS

Fiber Count	Number of Tube	Number of Filler	Number of fiber in per tube	Central Strength Member OD (mm)	Central strength member coated OD (mm)	Tube Outer/Inner Diameter (mm)	Cable Diameter (mm)	Cable Weight (kg/km)
216	18	-	12	2.5	N/A	2.2±0.1 /1.5±0.2	17.5±0.5	336*

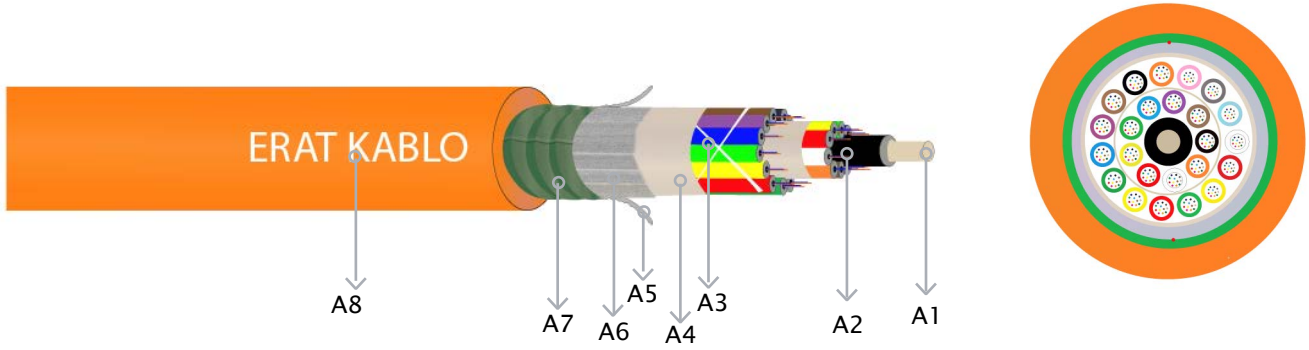
Mechanical and Environmental Properties

Physical tests	Conditions	Requirement	Standard
Tensile Strength (for 24-48 fibers)	3500 N (during Installation) 2100 N (during Operation)	Maximum fiber strain: %0.33	IEC 60794-1-E1
Impact Resistance	30Nm , 3 impacts , 300mm	No fiber break	IEC 60794-1-E1
Crush Resistance	4000 N/10cm	No fiber break	IEC 60794-1-E3
Temperature Cycling	-40 to +70 °C	Maximum loss:0.05 dB	IEC 60794-1-F1
Bend Radius (during installation)	20x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Bend Radius (during Service)	10x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Repeating Bending	20xcable diameter between	Maximum loss:0.05 dB	IEC 60794-1-E6
Water Penetration	1 m length in 24 hour	No water leak	IEC 60794-1-F5
Operation Temperature	-40 to +70 °C		
Storage and Transportation Temperature	-40 to +70 °C		
Installation Temperature	-20 to +60 °C		

STANDARD SM FIBER ITU-T G 652 D

FPROPERTIES	SPECIFIED VALUES
Attenuation (max.)	0.36 dB/km (1310 nm) 0.22 dB/km (1550 nm)
MFD	9.2±0.4 μm(1310 nm) 10.3±0.5 μm(1550 nm)
Chromatic Dispersion (max)	3.5 ps/(nmxkm) (1310 nm) 17 ps/(nmxkm) (1550 nm)
Cladding diameter	125±0.3μm
Core Concentricity error (max)	0.6 μm
Zero dispersion wavelength	1300nm ≤ ≤1324nm
Cladding non-circularity (max)	%1
Coating diameter	250±10 μm
Cut Off Wavelength	≤1260nm
Proof Test	8.4 N
Proof Test strain	%1.00

288 Core SM MLT SJSA F/O Cable



- A1 Central Member
- A2 Optical Fiber
- A3 Loose Tube
- A4 Water swellable tape
- A5 Ripcord
- A6 Glass Yarn
- A7 Corrugated Steel Tape
- A8 Outer Jacket PE



Ürünleriniz Güvenli Bir Şekilde
Sevkiyata Hazırlanır

Marka/Model : EK-TSF92MSJSAPE3-288
Türksat Onay Kodu : TKS-FOM-112

Physical Description



- 288 fibers armored outdoor fiber optic cable,
- Thixotropic jelly filled loose tubes,
- Loose tubes and filler (if any) are SZ stranded around the non- metallic central strength member (FRP),
- Dry core,
- Glass yarn as strength elements,
- Corrugated steel armor,
- Outer jacket is made of medium density polyethylene,
- Ripcord is inserted for easy jackets removal.

Physical Specifications

Fiber Type	SM G652 D
Central strength member	All-dielectric FRP
Tube material	PBT (Polybutylene Terephthalate)
Color of loose tubes	Red, Yellow, Green , Blue, Violet, Brown, Black, Orange, White / Red, Yellow, Green , Blue, Violet, Brown, Black, Orange,Pink, Gray, Aqua, White, Red-Black, Yellow-Black, Green-Black
Color of fibers in per tube	Red, Yellow, Green , Blue, Violet, Brown, Black, Orange, Pink, Gray, Aqua, Natural
Tube filling compound	Thixotropic jelly
Core filling compound	-
Tape wrap	Water swellable tape
Strength elements	Glass yarns
Ripcord	Aramid or polyester cord
Identification tape marking	As a customer request
Inner jacket	-
Surface marking	As a customer request
Armor	Corrugated steel tape
Outer jacket	Orange MDPE, thickness nominal 1.8±0.2 mm. (with armor)



SPECIFICATIONS

Fiber Count	Number of Tube	Number of Filler	Number of fiber in per tube	Central Strength Member OD (mm)	Central strength member coated OD (mm)	Tube Outer/Inner Diameter (mm)	Cable Diameter (mm)	Cable Weight (kg/km)
288	24	-	12	2.5	4.3	2.2±0.1 /1.5±0.2	20.5±0.5	336*

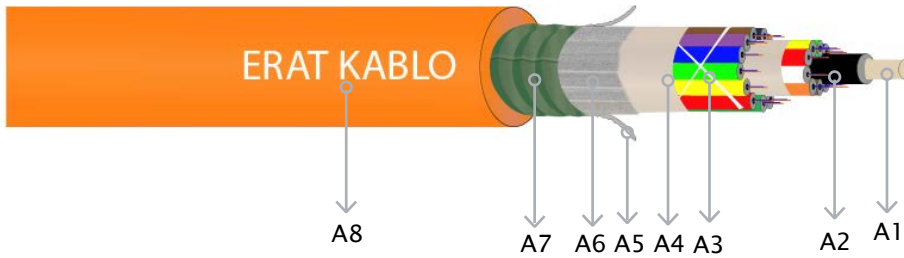
Mechanical and Environmental Properties

Physical tests	Conditions	Requirement	Standard
Tensile Strength (for 24-48 fibers)	3500 N (during Installation) 2100 N (during Operation)	Maximum fiber strain: %0.33	IEC 60794-1-E1
Impact Resistance	30Nm , 3 impacts , 300mm	No fiber break	IEC 60794-1-E1
Crush Resistance	4000 N/10cm	No fiber break	IEC 60794-1-E3
Temperature Cycling	-40 to +70 °C	Maximum loss:0.05 dB	IEC 60794-1-F1
Bend Radius (during installation)	20x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Bend Radius (during Service)	10x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Repeating Bending	20xcable diameter between	Maximum loss:0.05 dB	IEC 60794-1-E6
Water Penetration	1 m length in 24 hour	No water leak	IEC 60794-1-F5
Operation Temperature	-40 to +70 °C		
Storage and Transportation Temperature	-40 to +70 °C		
Installation Temperature	-20 to +60 °C		

STANDARD SM FIBER ITU-T G 652 D

FPROPERTIES	SPECIFIED VALUES
Attenuation (max.)	0.36 dB/km (1310 nm) 0.22 dB/km (1550 nm)
MFD	9.2±0.4 µm(1310 nm) 10.3±0.5 µm(1550 nm)
Chromatic Dispersion (max)	3.5 ps/(nmxkm) (1310 nm) 17 ps/(nmxkm) (1550 nm)
Cladding diameter	125±0.3µm
Core Concentricity error (max)	0.6 µm
Zero dispersion wavelength	1300nm ≤ ≤1324nm
Cladding non-circularity (max)	%1
Coating diameter	250±10 µm
Cut Off Wavelength	≤1260nm
Proof Test	8.4 N
Proof Test strain	%1.00

432 Core SM MLT SJSA F/O Cable



A1 Central Member
A2 Optical Fiber
A3 Loose Tube
A4 Water swellable tape

A5 Ripcord
A6 Glass Yarn
A7 Corrugated Steel
A8 Tape Outer Jacket PE



Ürünleriniz Güvenli Bir Şekilde
Sevkiyata Hazırlanır

Marka/Model : EK-TSF92MSJSAPE3-432

Türksat Onay Kodu : TKS-FOM-51

Physical Description



- 432 fibers armored outdoor fiber optic cable,
- Thixotropic jelly filled loose tubes,
- Loose tubes and filler (if any) are SZ stranded around the non-metallic central strength member (FRP),
- Dry core,
- Glass yarn as strength elements,
- Corrugated steel armor,
- Outer jacket is made of medium density polyethylene,
- Ripcord is inserted for easy jackets removal.

Physical Specifications

Physical Specifications	
Fiber Type	SM G652 D
Central strength member	All-dielectric FRP
Tube material	PBT (Polybutylene Terephthalate)
Color of loose tubes	Red, Yellow, Green , Blue, Violet, White / Red, Yellow, Green , Blue, Violet, Brown, Black, Orange, Pink, Gray, Aqua, Natural
Color of fibers in per tube	Red, Yellow, Green , Blue, Violet, Brown, Black, Orange, Pink, Gray, Aqua, Natural, Red-Black, Yellow-Black, Green-Black, Blue-Black, Violet-Black, Brown-Black, White-Black, Orange-Black, Pink-Black, Gray-Black, Aqua-Black, Natural-Black
Tube filling compound	Thixotropic jelly
Core filling compound	-
Tape wrap	Water swellable tape
Strength elements	Glass yarns
Ripcord	Aramid or polyester cord
Identification tape marking	As a customer request
Inner jacket	-
Surface marking	As a customer request
Armor	Corrugated steel tape
Outer jacket	Orange MDPE, thickness nominal 1.8±0.2 mm. (with armor)



TURKSAT

SPECIFICATIONS

Fiber Count	Number of Tube	Number of Filler	Number of fiber in per tube	Central Strength Member OD (mm)	Central strength member coated OD (mm)	Tube Outer/Inner Diameter (mm)	Cable Diameter (mm)	Cable Weight (kg/km)
432	18	-	12	2.5	N/A	2.2±0.1 /1.5±0.2	17.5±0.5	336*

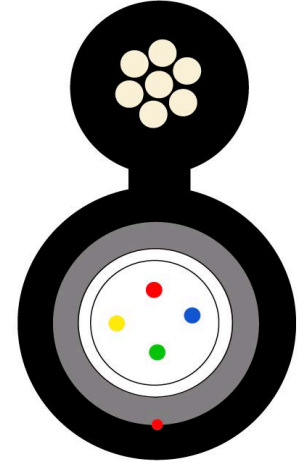
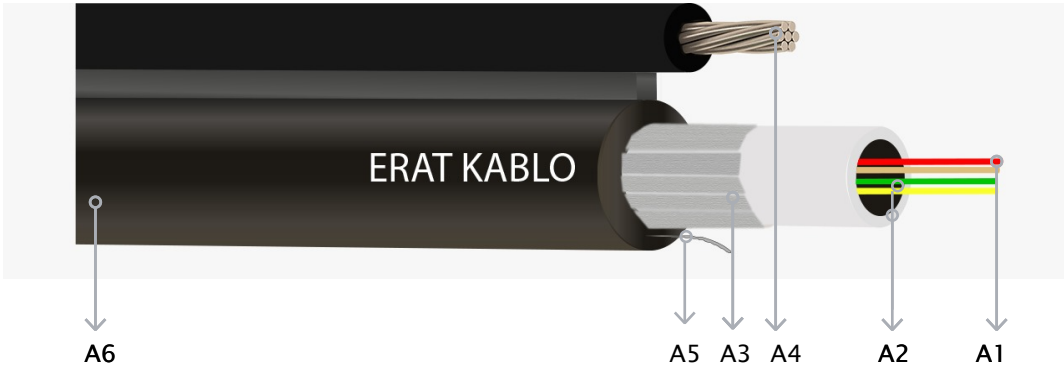
Mechanical and Environmental Properties

Physical tests	Conditions	Requirement	Standard
Tensile Strength (for 24-48 fibers)	3500 N (during Installation) 2100 N (during Operation)	Maximum fiber strain: %0.33	IEC 60794-1-E1
Impact Resistance	30Nm , 3 impacts , 300mm	No fiber break	IEC 60794-1-E1
Crush Resistance	4000 N/10cm	No fiber break	IEC 60794-1-E3
Temperature Cycling	-40 to +70 °C	Maximum loss:0.05 dB	IEC 60794-1-F1
Bend Radius (during installation)	20x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Bend Radius (during Service)	10x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Repeating Bending	20xcable diameter between	Maximum loss:0.05 dB	IEC 60794-1-E6
Water Penetration	1 m length in 24 hour	No water leak	IEC 60794-1-F5
Operation Temperature	-40 to +70 °C		
Storage and Transportation Temperature	-40 to +70 °C		
Installation Temperature	-20 to +60 °C		

STANDARD SM FIBER ITU-T G 652 D

FPROPERTIES	SPECIFIED VALUES
Attenuation (max.)	0.36 dB/km (1310 nm) 0.22 dB/km (1550 nm)
MFD	9.2±0.4 μm(1310 nm) 10.3±0.5 μm(1550 nm)
Chromatic Dispersion (max)	3.5 ps/(nmxkm) (1310 nm) 17 ps/(nmxkm) (1550 nm)
Cladding diameter	125±0.3μm
Core Concentricity error (max)	0.6 μm
Zero dispersion wavelength	1300nm ≤ ≤1324nm
Cladding non-circularity (max)	%1
Coating diameter	250±10 μm
Cut Off Wavelength	≤1260nm
Proof Test	8.4 N
Proof Test strain	%1.00

4 Core SM SLT SJNMA Fig 8 F/O Cable



A1 Optical Fiber
A2 Loose Tube
A3 Glass Yarn
A4 Messenger Wire

A5 Ripcord
A6 Outer Jacket



Ürünleriniz Güvenli Bir Şekilde
Sevkiyata Hazırlanır

Marka/Model : EK-TSFA2HWSJNMAPE0-004
Türksat Onay Kodu : TKS-FOM-115

❖ Physical Description

- › 4 fibers figure 8 outdoor fiber optic cable,
- › Loose Tube
- › Thixotropic jelly filled loose tubes,
- › Glass yarn as strength elements,
- › Outer jacket is made of medium density polyethylene,
- › Ripcord is inserted for easy jackets removal.



Physical Specifications	
Fiber Type	SM G652 D
Central strength member	All-dielectric FRP
Tube material	PBT (Polybutylene Terephthalate)
Color of loose tubes	Natural
Color of fibers in per tube	Red, Yellow, Green, Natural
Tube filling compound	Thixotropic jelly
Core filling compound	-
Tape wrap	-
Strength elements	Glass Yarns
Ripcord	Aramid cord
Identification tape marking	As a customer request
Outer jacket	Black MDPE, thickness nominal ≥ 1.1 mm.
Surface marking	As a customer request
Armor	-
Messenger Wire	Steel Wire



SPECIFICATIONS

Fiber Count	Number of Tube	Number of Filler	Number of fiber in per tube	Central Strength Member OD (mm)	Central strength member coated OD (mm)	Tube Outer/Inner Diameter (mm)	Cable Diameter (mm)	Cable Weighth (kg/km)
4	1	0	4	-	-	3±0.1/2±0.2	6.2±0.5	105*

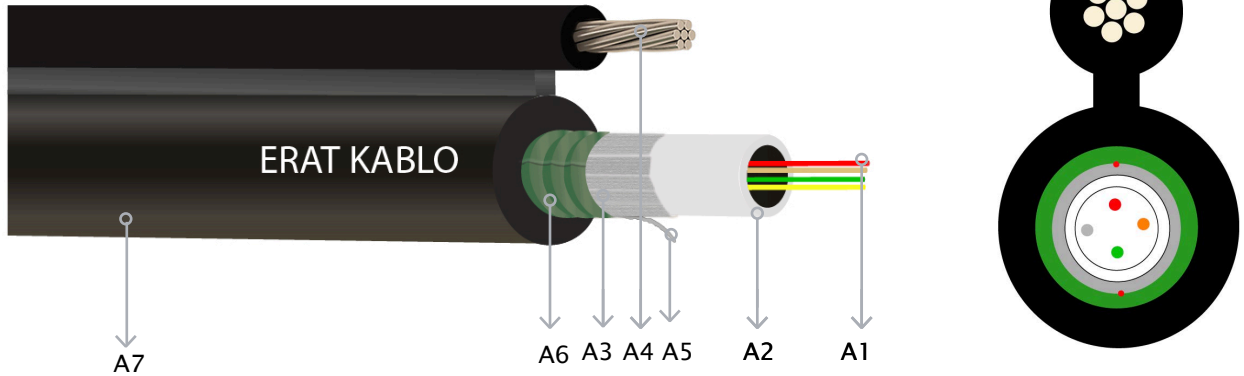
Mechanical and Environmental Properties

Physical tests	Conditions	Requirement	Standard
Tensile Strength	2400 N (during Installation) 1800 N (during Operation)	Maximum fiber strain: %0.33	IEC 60794-1-E1
Impact Resistance	30Nm , 3 impacts , 300mm	No fiber break	IEC 60794-1-E1
Crush Resistance	4000 N/10cm	No fiber break	IEC 60794-1-E3
Temperature Cycling	-40 to +70 °C	Maximum loss:0.05 dB	IEC 60794-1-F1
Bend Radius (during installation)	20x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Bend Radius (during Service)	10x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Repeating Bending	20xcable diameter between	Maximum loss:0.05 dB	IEC 60794-1-E6
Water Penetration	1 m length in 24 hour	No water leak	IEC 60794-1-F5
Operation Temperature	-40 to +70 °C		
Storage and Transportation Temperature	-40 to +70 °C		
Installation Temperature	-20 to +60 °C		

STANDARD SM FIBER ITU-T G 652 D

FPROPERTIES	SPECIFIED VALUES
Attenuation (max.)	0.36 dB/km (1310 nm) 0.22 dB/km (1550 nm)
MFD	9.2±0.4 μm(1310 nm) 10.3±0.5 μm(1550 nm)
Chromatic Dispersion (max)	3.5 ps/(nmxkm) (1310 nm) 17 ps/(nmxkm) (1550 nm)
Cladding diameter	125±0.3μm
Core Concentricity error (max)	0.6 μm
Zero dispersion wavelength	1300nm ≤ λ ≤ 1324nm
Cladding non-circularity (max)	%1
Coating diameter	250±10 μm
Cut Off Wavelength	≤1260nm
Proof Test	8.4 N
Proof Test strain	%1.00

4 Core SM MLT SJSA Fig 8 F/O Cable



A1 Optical Fiber
A2 Loose Tube
A3 Glass Yarn
A4 Messenger Wire

A5 Ripcord
A6 Corrugated Steel Tape
A7 Outer Jacket



Ürünleriniz Güvenli Bir Şekilde
Sevkiyata Hazırlanır

Marka/Model : EK-TSFA2HWSJSAPE0-004
Türksat Onay Kodu : TKS-FOM-52

❖ Physical Description

- › 4 fibers armored outdoor fiber optic cable,
- › Loose Tube
- › Thixotropic jelly filled loose tubes,
- › Glass yarn as strength elements,
- › Outer jacket is made of medium density polyethylene,
- › Ripcord is inserted for easy jackets removal.



Physical Specifications	
Fiber Type	SM G652 D
Central strength member	All-dielectric FRP
Tube material	PBT (Polybutylene Terephthalate)
Color of loose tubes	Natural
Color of fibers in per tube	Red, Yellow, Green, Natural
Tube filling compound	Thixotropic jelly
Core filling compound	-
Tape wrap	-
Strength elements	Glass Yarns
Ripcord	Aramid cord
Identification tape marking	As a customer request
Outer jacket	Black MDPE, thickness nominal ≥ 1.5 mm.
Surface marking	As a customer request
Armor	Corrugated steel tape
Messenger Wire	Steel wire



SPECIFICATIONS

Fiber Count	Number of Tube	Number of Filler	Number of fiber in per tube	Central Strength Member OD (mm)	Central strength member coated OD (mm)	Tube Outer/Inner Diameter (mm)	Cable Diameter (mm)	Cable Weighth (kg/km)
4	1	0	4	-	-	3±0.1/2±0.2	10.8±0.5	130*

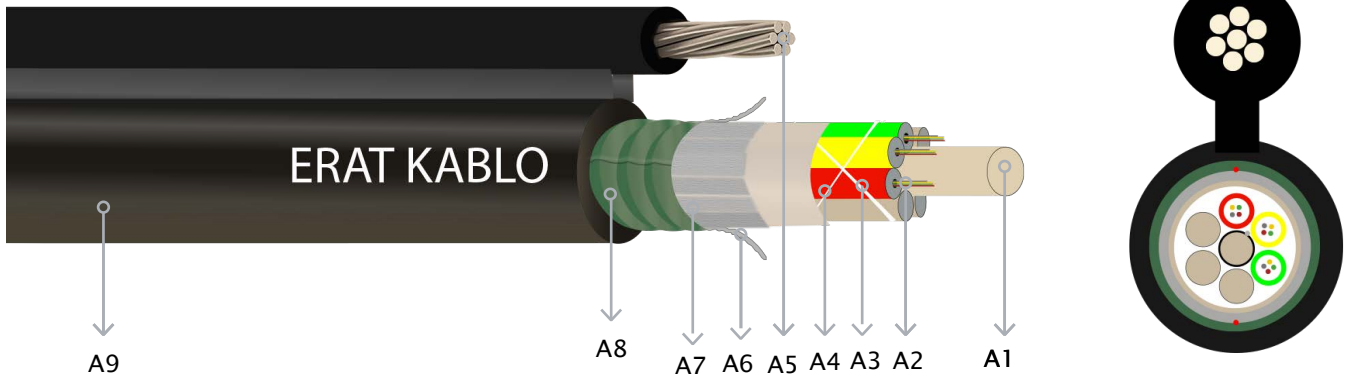
Mechanical and Environmental Properties

Physical tests	Conditions	Requirement	Standard
Tensile Strength	2400 N (during Installation) 1800 N (during Operation)	Maximum fiber strain: %0.33	IEC 60794-1-E1
Impact Resistance	30Nm , 3 impacts , 300mm	No fiber break	IEC 60794-1-E1
Crush Resistance	4000 N/10cm	No fiber break	IEC 60794-1-E3
Temperature Cycling	-40 to +70 °C	Maximum loss:0.05 dB	IEC 60794-1-F1
Bend Radius (during installation)	20x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Bend Radius (during Service)	10x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Repeating Bending	20xcable diameter between	Maximum loss:0.05 dB	IEC 60794-1-E6
Water Penetration	1 m length in 24 hour	No water leak	IEC 60794-1-F5
Operation Temperature	-40 to +70 °C		
Storage and Transportation Temperature	-40 to +70 °C		
Installation Temperature	-20 to +60 °C		

STANDARD SM FIBER ITU-T G 652 D

FPROPERTIES	SPECIFIED VALUES
Attenuation (max.)	0.36 dB/km (1310 nm) 0.22 dB/km (1550 nm)
MFD	9.2±0.4 μm(1310 nm) 10.3±0.5 μm(1550 nm)
Chromatic Dispersion (max)	3.5 ps/(nmxkm) (1310 nm) 17 ps/(nmxkm) (1550 nm)
Cladding diameter	125±0.3μm
Core Concentricity error (max)	0.6 μm
Zero dispersion wavelength	1300nm ≤ λ ≤ 1324nm
Cladding non-circularity (max)	%1
Coating diameter	250±10 μm
Cut Off Wavelength	≤1260nm
Proof Test	8.4 N
Proof Test strain	%1.00

12 Core SM MLT SJSA Fig 8 F/O Cable



- | | | |
|------------------------|-------------------|--------------------------|
| A1 Central Member | A5 Messenger Wire | A8 Corrugated Steel Tape |
| A2 Optical Fiber | A6 Ripcord | A9 Outer Jacket |
| A3 Loose Tube | A7 Glass Yarn | |
| A4 Water Blocking Tube | | |



Ürünleriniz Güvenli Bir Şekilde
Sevkiyata Hazırlanır

Marka/Model : EK-TSFA2HWMSJSAPE0-012

Türksat Onay Kodu : TKS-FOM-05

❖ Physical Description

- 12 fibers armored outdoor fiber optic cable,
- Thixotropic jelly filled loose tubes,
- Loose tubes and filler (if any) are SZ stranded around the non-metallic central strength member (FRP),
- Dry core
- Glass yarn as strength elements,
- Corrugated steel armor,
- Outer jacket is made of medium density polyethylene,
- Ripcord is inserted for easy jackets removal.



Physical Specifications	
Fiber Type	SM G652 D
Central strength member	All-dielectric FRP
Tube material	PBT (Polybutylene Terephthalate)
Color of loose tubes	Red, Yellow, Green, Natural, Natural, Natural
Color of fibers in per tube	Red, Yellow, Green, Blue, Violet, Brown, Black, Orange, Pink, Gray, Aqua, Natural
Tube filling compound	Thixotropic jelly
Core filling compound	-
Tape wrap	Water swellable tape
Strength elements	Glass Yarns
Ripcord	Aramid cord
Identification tape marking	As a customer request
Outer jacket	Black MDPE, thickness nominal 1.8±0.2 mm. (with armor)
Surface marking	As a customer request
Armor	Corrugated steel tape
Messenger Wire	Steel Wire



SPECIFICATIONS

Fiber Count	Number of Tube	Number of Filler	Number of fiber in per tube	Central Strength Member OD (mm)	Central strength member coated OD (mm)	Tube Outer/Inner Diameter (mm)	Cable Diameter (mm)	Cable Weighth (kg/km)
12	3	3	4	2.1	N/A	2.1±0.1/1.4±0.2	12.0±0.5	353*

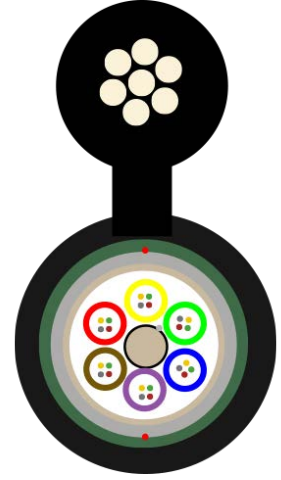
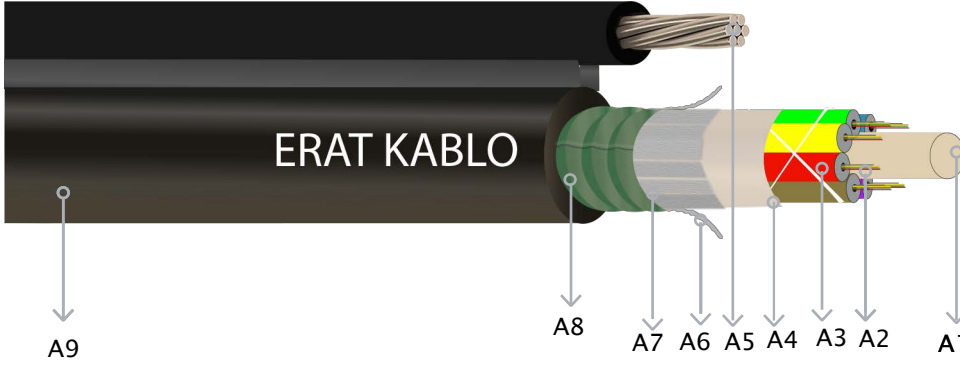
Mechanical and Environmental Properties

Physical tests	Conditions	Requirement	Standard
Tensile Strength	5000 N (during Installation) 4000 N (during Operation)	Maximum fiber strain: %0.33	IEC 60794-1-E1
Impact Resistance	30Nm , 3 impacts , 300mm	No fiber break	IEC 60794-1-E1
Crush Resistance	4000 N/10cm	No fiber break	IEC 60794-1-E3
Temperature Cycling	-40 to +70 °C	Maximum loss:0.05 dB	IEC 60794-1-F1
Bend Radius (during installation)	20x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Bend Radius (during Service)	10x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Repeating Bending	20xcable diameter between	Maximum loss:0.05 dB	IEC 60794-1-E6
Water Penetration	1 m length in 24 hour	No water leak	IEC 60794-1-F5
Operation Temperature	-40 to +70 °C		
Storage and Transportation Temperature	-40 to +70 °C		
Installation Temperature	-20 to +60 °C		

STANDARD SM FIBER ITU-T G 652 D

FPROPERTIES	SPECIFIED VALUES
Attenuation (max.)	0.36 dB/km (1310 nm) 0.22 dB/km (1550 nm)
MFD	9.2±0.4 μm(1310 nm) 10.3±0.5 μm(1550 nm)
Chromatic Dispersion (max)	3.5 ps/(nmxkm) (1310 nm) 17 ps/(nmxkm) (1550 nm)
Cladding diameter	125±0.3μm
Core Concentricity error (max)	0.6 μm
Zero dispersion wavelength	1300nm ≤ λ ≤ 1324nm
Cladding non-circularity (max)	%1
Coating diameter	250±10 μm
Cut Off Wavelength	≤1260nm
Proof Test	8.4 N
Proof Test strain	%1.00

24 Core SM MLT SJSA Fig 8 F/O Cable



- A1 Central Member
- A2 Optical Fiber
- A3 Loose Tube
- A4 Water Blocking Tabe
- A5 Messenger Wire
- A6 Ripcord
- A7 Glass Yarn
- A8 Corrugated Steel
- Tape A9 Outer Jacket



Ürünleriniz Güvenli Bir Şekilde
Sevkiyata Hazırlanır

Marka/Model : EK-TSFA2HWMSJSAPE0-024
Türksat Onay Kodu: TKS-FOM-06

Physical Description



24 fibers armored outdoor aerial figure 8 fiber optic cable,
Thixotropic jelly filled loose tubes,
Loose tubes and filler (if any) are SZ stranded around the non- metallic central strength member (FRP),
Dry core,
Glass yarn as strength elements,
Corrugated steel armor,
Outer jacket is made of medium density polyethylene,
Ripcord is inserted for easy jackets removal.

Physical Specifications

Physical Specifications	
Fiber Type	SM G652 D
Central strength member	All-dielectric FRP
Tube material	PBT (Polybutylene Terephthalate)
Color of loose tubes	Red, Yellow, Green , Blue, Violet, White
Color of fibers in per tube	Red, Yellow, Green , Natural
Tube filling compound	Thixotropic jelly
Core filling compound	-
Tape wrap	Water swellable tape
Strength elements	Glass yarns
Ripcord	Aramid cord
Identification tape marking	As a customer request
Outer jacket	Black MDPE, thickness nominal 1.8±0.2 mm. (with armor)
Surface marking	As a customer request
Armor	Corrugated steel tape
Messenger Wire	Steel Wire



SPECIFICATIONS

Fiber Count	Number of Tube	Number of Filler	Number of fiber in per tube	Central Strength Member OD (mm)	Central strength member coated OD (mm)	Tube Outer/Inner Diameter (mm)	Cable Diameter (mm)	Cable Weight (kg/km)
24	6	-	4	2.1	N/A	2.1±0.1/1.4±0.2	12.0±0.5	255*

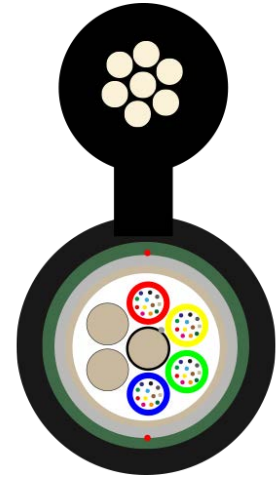
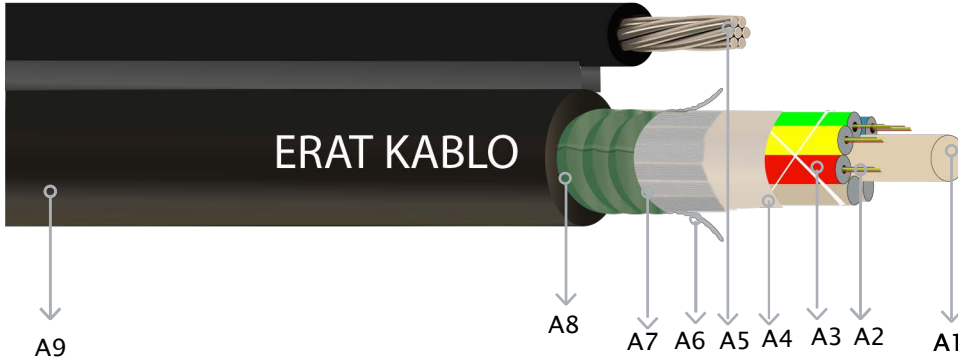
Mechanical and Environmental Properties

Physical tests	Conditions	Requirement	Standard
Tensile Strength	5000 N (during Installation) 4000 N (during Operation)	Maximum fiber strain: %0.33	IEC 60794-1-E1
Impact Resistance	30Nm , 3 impacts , 300mm	No fiber break	IEC 60794-1-E1
Crush Resistance	4000 N/10cm	No fiber break	IEC 60794-1-E3
Temperature Cycling	-40 to +70 °C	Maximum loss:0.05 dB	IEC 60794-1-F1
Bend Radius (during installation)	20x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Bend Radius (during Service)	10x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Repeating Bending	20xcable diameter between	Maximum loss:0.05 dB	IEC 60794-1-E6
Water Penetration	1 m length in 24 hour	No water leak	IEC 60794-1-F5
Operation Temperature	-40 to +70 °C		
Storage and Transportation Temperature	-40 to +70 °C		
Installation Temperature	-20 to +60 °C		

STANDARD SM FIBER ITU-T G 652 D

FPROPERTIES	SPECIFIED VALUES
Attenuation (max.)	0.36 dB/km (1310 nm) 0.22 dB/km (1550 nm)
MFD	9.2±0.4 µm(1310 nm) 10.3±0.5 µm(1550 nm)
Chromatic Dispersion (max)	3.5 ps/(nmxkm) (1310 nm) 17 ps/(nmxkm) (1550 nm)
Cladding diameter	125±0.3µm
Core Concentricity error (max)	0.6 µm
Zero dispersion wavelength	1300nm ≤ ≤1324nm
Cladding non-circularity (max)	%1
Coating diameter	250±10 µm
Cut Off Wavelength	≤1260nm
Proof Test	8.4 N
Proof Test strain	%1.00

48 Core SM MLT SJSA Fig 8 F/O Cable



- A1 Central Member
- A2 Optical Fiber
- A3 Loose Tube
- A4 Water Blocking Tape
- A5 Messenger Wire
- A6 Ripcord
- A7 Glass Yarn
- A8 Corrugated Steel Tape
- A9 Outer Jacket



Ürünleriniz Güvenli Bir Şekilde
Sevkiyata Hazırlanır

Marka/Model : EK-TSFA2HWMSJSAPE0-048

Türksat Onay Kodu : TKS-FOM-39

Physical Description

- 48bers armored outdoor aerial figure 8 fiber optic cable,
- Thixotropic jelly filled loose tubes,
- Loose tubes and filler (if any) are SZ stranded around the non- metallic central strength member (FRP),
- Dry core,
- Glass yarn as strength elements,
- Corrugated steel armor,
- Outer jacket is made of medium density polyethylene,
- Ripcord is inserted for easy jackets removal.



Physical Specifications

Physical Specifications	
Fiber Type	SM G652 D
Central strength member	All-dielectric FRP
Tube material	PBT (Polybutylene Terephthalate)
Color of loose tubes	Red, Yellow, Green , Blue, Natural, Natural
Color of fibers in per tube	Red, Yellow, Green , Blue, Violet, Brown, Black, Orange, Pink, Gray, Aqua, Natural
Tube filling compound	Thixotropic jelly
Core filling compound	-
Tape wrap	Water swellable tape
Strength elements	Glass yarns
Ripcord	Aramid cord
Identification tape marking	As a customer request
Outer jacket	Black MDPE, thickness nominal 1.8±0.2 mm. (with armor)
Surface marking	As a customer request
Armor	Corrugated steel tape
Messenger Wire	Steel Wire



SPECIFICATIONS

Fiber Count	Number of Tube	Number of Filler	Number of fiber in per tube	Central Strength Member OD (mm)	Central strength member coated OD (mm)	Tube Outer/Inner Diameter (mm)	Cable Diameter (mm)	Cable Weight (kg/km)
48	4	2	12	2.5	N/A	2.2±0.1/1.5±0.2	12.6±0.5	265*

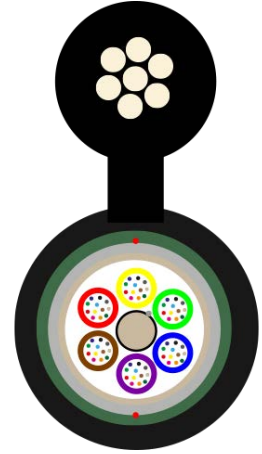
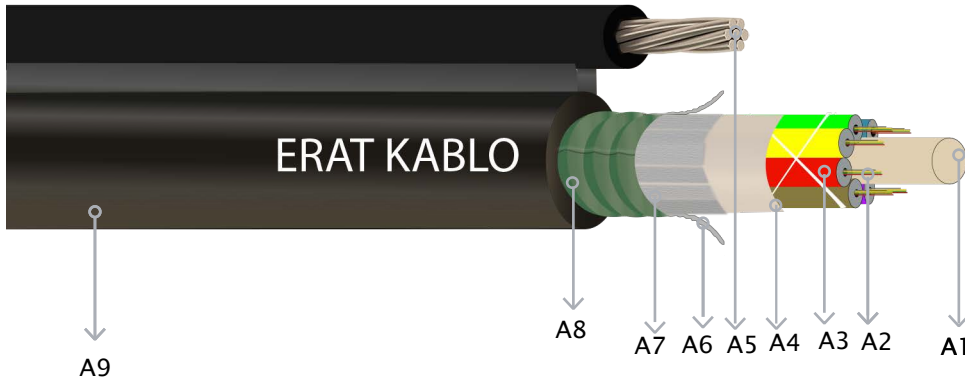
Mechanical and Environmental Properties

Physical tests	Conditions	Requirement	Standard
Tensile Strength	5000 N (during Installation) 4000 N (during Operation)	Maximum fiber strain: %0.33	IEC 60794-1-E1
Impact Resistance	30Nm , 3 impacts , 300mm	No fiber break	IEC 60794-1-E1
Crush Resistance	4000 N/10cm	No fiber break	IEC 60794-1-E3
Temperature Cycling	-40 to +70 °C	Maximum loss:0.05 dB	IEC 60794-1-F1
Bend Radius (during installation)	20x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Bend Radius (during Service)	10x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Repeating Bending	20xcable diameter between	Maximum loss:0.05 dB	IEC 60794-1-E6
Water Penetration	1 m length in 24 hour	No water leak	IEC 60794-1-F5
Operation Temperature	-40 to +70 °C		
Storage and Transportation Temperature	-40 to +70 °C		
Installation Temperature	-20 to +60 °C		

STANDARD SM FIBER ITU-T G 652 D

FPROPERTIES	SPECIFIED VALUES
Attenuation (max.)	0.36 dB/km (1310 nm) 0.22 dB/km (1550 nm)
MFD	9.2±0.4 µm(1310 nm) 10.3±0.5 µm(1550 nm)
Chromatic Dispersion (max)	3.5 ps/(nmxkm) (1310 nm) 17 ps/(nmxkm) (1550 nm)
Cladding diameter	125±0.3µm
Core Concentricity error (max)	0.6 µm
Zero dispersion wavelength	1300nm ≤ ≤1324nm
Cladding non-circularity (max)	%1
Coating diameter	250±10 µm
Cut Off Wavelength	≤1260nm
Proof Test	8.4 N
Proof Test strain	%1.00

72 Core SM MLT SJSA Fig 8 F/O Cable



A1 Central Member

A2 Optical Fiber

A3 Loose Tube

A4 Water Blocking Tape

A5 Messenger Wire

A6 Ripcord

A7 Glass Yarn

A8 Corrugated Steel Tape

A9 Outer Jacket



Ürünleriniz Güvenli Bir Şekilde
Sevkiyata Hazırlanır

Marka/Model : EK-TSFA2HWMSJSAPE0-072

Türksat Onay Kodu : TKS-FOM-40

Physical Description

- 72 fibers armored outdoor aerial figure 8 fiber optic cable,
- Thixotropic jelly filled loose tubes,
- Loose tubes and filler (if any) are SZ stranded around the non-metallic central strength member (FRP),
- Dry core,
- Glass yarn as strength elements,
- Corrugated steel armor,
- Outer jacket is made of medium density polyethylene, Ripcord is inserted for easy jackets removal.



Physical Specifications

Physical Specifications	
Fiber Type	SM G652 D
Central strength member	All-dielectric FRP
Tube material	PBT (Polybutylene Terephthalate)
Color of loose tubes	Red, Yellow, Green , Blue, Violet, Brown
Color of fibers in per tube	Red, Yellow, Green , Blue, Violet, Brown, Black, Orange, Pink, Gray, Aqua, Natural
Tube filling compound	Thixotropic jelly
Core filling compound	-
Tape wrap	Water swellable tape
Strength elements	Glass yarns
Ripcord	Aramid cord
Identification tape marking	As a customer request
Outer jacket	Black MDPE, thickness nominal 1.8±0.2 mm. (with armor)
Surface marking	As a customer request
Armor	Corrugated steel tape
Messenger Wire	Steel Wire



TURKSAT

SPECIFICATIONS

Fiber Count	Number of Tube	Number of Filler	Number of fiber in per tube	Central Strength Member OD (mm)	Central strength member coated OD (mm)	Tube Outer/Inner Diameter (mm)	Cable Diameter (mm)	Cable Weight (kg/km)
72	6	-	12	2.5	N/A	2.2±0.1 / 1.5±0.2	12.6±0.5	245*

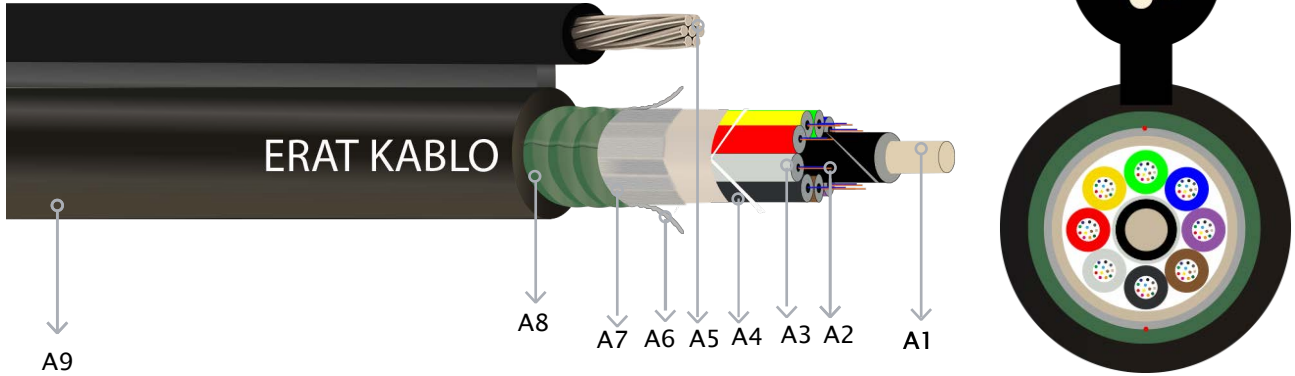
Mechanical and Environmental Properties

Physical tests	Conditions	Requirement	Standard
Tensile Strength	5000 N (during Installation) 4000 N (during Operation)	Maximum fiber strain: %0.33	IEC 60794-1-E1
Impact Resistance	30Nm , 3 impacts , 300mm	No fiber break	IEC 60794-1-E1
Crush Resistance	4000 N/10cm	No fiber break	IEC 60794-1-E3
Temperature Cycling	-40 to +70 °C	Maximum loss:0.05 dB	IEC 60794-1-F1
Bend Radius (during installation)	20x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Bend Radius (during Service)	10x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Repeating Bending	20xcable diameter between	Maximum loss:0.05 dB	IEC 60794-1-E6
Water Penetration	1 m length in 24 hour	No water leak	IEC 60794-1-F5
Operation Temperature	-40 to +70 °C		
Storage and Transportation Temperature	-40 to +70 °C		
Installation Temperature	-20 to +60 °C		

STANDARD SM FIBER ITU-T G 652 D

FPROPERTIES	SPECIFIED VALUES
Attenuation (max.)	0.36 dB/km (1310 nm) 0.22 dB/km (1550 nm)
MFD	9.2±0.4 μm(1310 nm) 10.3±0.5 μm(1550 nm)
Chromatic Dispersion (max)	3.5 ps/(nmxkm) (1310 nm) 17 ps/(nmxkm) (1550 nm)
Cladding diameter	125±0.3μm
Core Concentricity error (max)	0.6 μm
Zero dispersion wavelength	1300nm ≤ λ ≤ 1324nm
Cladding non-circularity (max)	%1
Coating diameter	250±10 μm
Cut Off Wavelength	≤1260nm
Proof Test	8.4 N
Proof Test strain	%1.00

96 Core SM MLT SJSA Fig 8 F/O Cable



- A1 Central Member A5 Messenger Wire A8 Corrugated Steel
A2 Optical Fiber A6 Ripcord Tape A9 Outer Jacket
A3 Loose Tube A7 Glass Yarn
A4 Water Blocking Tape



Ürünleriniz Güvenli Bir Şekilde
Sevkiyata Hazırlanır

Marka/Model : EK-TSFA2HWMSJSAPE0-096
Türksat Onay Kodu : TKS-FOM-07

Physical Description



96 fibers armored outdoor aerial figure 8 fiber optic cable,
Thixotropic jelly filled loose tubes,
Loose tubes and filler (if any) are SZ stranded around the non- metallic central strength member (FRP),
Dry core,
Glass yarn as strength elements,
Corrugated steel armor,
Outer jacket is made of medium density polyethylene,
Ripcord is inserted for easy jackets removal.

Physical Specifications

Fiber Type	SM G652 D
Central strength member	All-dielectric FRP
Tube material	PBT (Polybutylene Terephthalate)
Color of loose tubes	Red, Yellow, Green , Blue, Violet, Brown, Black, White
Color of fibers in per tube	Red, Yellow, Green , Blue, Violet, Brown, Black, Orange, Pink, Gray, Aqua, Natural
Tube filling compound	Thixotropic jelly
Core filling compound	-
Tape wrap	Water swellable tape
Strength elements	Glass yarns
Ripcord	Aramid cord
Identification tape marking	As a customer request
Outer jacket	Black MDPE, thickness nominal 1.8±0.2 mm. (with armor)
Surface marking	As a customer request
Armor	Corrugated steel tape
Messenger Wire	Steel Wire



TURKSAT

SPECIFICATIONS

Fiber Count	Number of Tube	Number of Filler	Number of fiber in per tube	Central Strength Member OD (mm)	Central strength member coated OD (mm)	Tube Outer/Inner Diameter (mm)	Cable Diameter (mm)	Cable Weight (kg/km)
96	8	-	12	2.5	3.7	2.2±0.1 / 1.5±0.2	14.0±0.5	425*

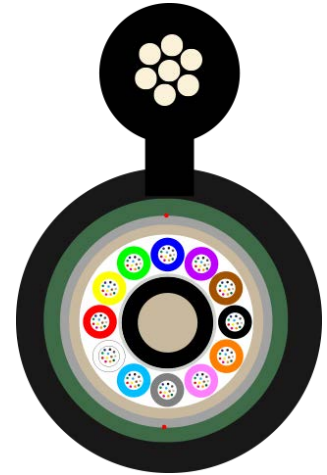
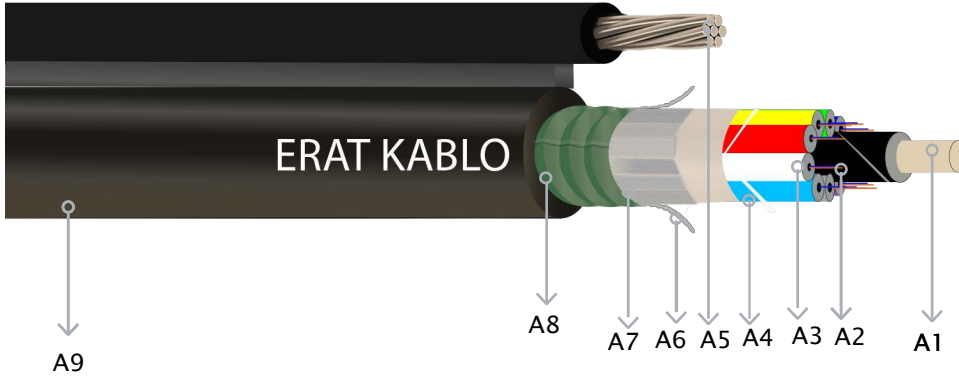
Mechanical and Environmental Properties

Physical tests	Conditions	Requirement	Standard
Tensile Strength (for 24-48 fibers)	5000 N (during Installation) 4000 N (during Operation)	Maximum fiber strain: %0.33	IEC 60794-1-E1
Impact Resistance	30Nm , 3 impacts , 300mm	No fiber break	IEC 60794-1-E1
Crush Resistance	4000 N/10cm	No fiber break	IEC 60794-1-E3
Temperature Cycling	-40 to +70 °C	Maximum loss:0.05 dB	IEC 60794-1-F1
Bend Radius (during installation)	20x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Bend Radius (during Service)	10x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Repeating Bending	20xcable diameter between	Maximum loss:0.05 dB	IEC 60794-1-E6
Water Penetration	1 m length in 24 hour	No water leak	IEC 60794-1-F5
Operation Temperature	-40 to +70 °C		
Storage and Transportation Temperature	-40 to +70 °C		
Installation Temperature	-20 to +60 °C		

STANDARD SM FIBER ITU-T G 652 D

FPROPERTIES	SPECIFIED VALUES
Attenuation (max.)	0.36 dB/km (1310 nm) 0.22 dB/km (1550 nm)
MFD	9.2±0.4 μm(1310 nm) 10.3±0.5 μm(1550 nm)
Chromatic Dispersion (max)	3.5 ps/(nmxkm) (1310 nm) 17 ps/(nmxkm) (1550 nm)
Cladding diameter	125±0.3μm
Core Concentricity error (max)	0.6 μm
Zero dispersion wavelength	1300nm ≤ λ ≤ 1324nm
Cladding non-circularity (max)	%1
Coating diameter	250±10 μm
Cut Off Wavelength	≤1260nm
Proof Test	8.4 N
Proof Test strain	%1.00

144 Core SM MLT SJSA Fig 8 F/O Cable



- A1 Central Member
- A2 Optical Fiber
- A3 Loose Tube
- A4 Water Blocking Tape
- A5 Messenger Wire
- A6 Ripcord
- A7 Glass Yarn
- A8 Corrugated Steel Tape
- A9 Outer Jacket



Ürünleriniz Güvenli Bir Şekilde
Sevkiyata Hazırlanır

Marka/Model : EK-TSFA2HWMSJSAPEO-144
Türksat Onay Kodu : TKS-FOM-41

Physical Description



- ✦ 144 fibers armored outdoor aerial figure 8 fiber optic cable,
- ✦ Thixotropic jelly filled loose tubes,
- ✦ Loose tubes and filler (if any) are SZ stranded around the non-metallic central strength member (FRP),
- ✦ Dry core,
- ✦ Glass yarn as strength elements,
- ✦ Corrugated steel armor,
- ✦ Outer jacket is made of medium density polyethylene,
- ✦ Ripcord is inserted for easy jackets removal.

Physical Specifications

Fiber Type	SM G652 D
Central strength member	All-dielectric FRP
Tube material	PBT (Polybutylene Terephthalate)
Color of loose tubes	Red, Yellow, Green , Blue, Violet, Brown, Black, Orange, Pink, Gray, Aqua, White
Color of fibers in per tube	Red, Yellow, Green , Blue, Violet, Brown, Black, Orange, Pink, Gray, Aqua, Natural
Tube filling compound	Thixotropic jelly
Core filling compound	-
Tape wrap	Water swellable tape
Strength elements	Glass yarns
Ripcord	Aramid cord
Identification tape marking	As a customer request
Outer jacket	Black MDPE, thickness nominal 1.8±0.2 mm. (with armor)
Surface marking	As a customer request
Armor	Corrugated steel tape
Messenger Wire	Steel Wire



TURKSAT

SPECIFICATIONS

Fiber Count	Number of Tube	Number of Filler	Number of fiber in per tube	Central Strength Member OD (mm)	Central strength member coated OD (mm)	Tube Outer/Inner Diameter (mm)	Cable Diameter (mm)	Cable Weight (kg/km)
144	12	-	12	2.5	6.5	2.2±0.1 / 1.5±0.2	17.0±0.5	325*

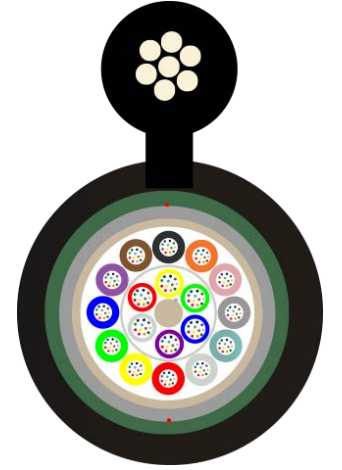
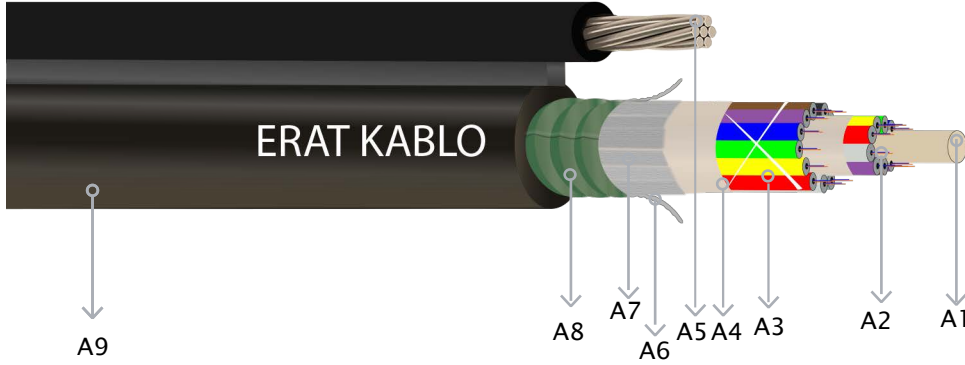
Mechanical and Environmental Properties

Physical tests	Conditions	Requirement	Standard
Tensile Strength (for 24-48 fibers)	5000 N (during Installation) 4000 N (during Operation)	Maximum fiber strain: %0.33	IEC 60794-1-E1
Impact Resistance	30Nm , 3 impacts , 300mm	No fiber break	IEC 60794-1-E1
Crush Resistance	4000 N/10cm	No fiber break	IEC 60794-1-E3
Temperature Cycling	-40 to +70 °C	Maximum loss:0.05 dB	IEC 60794-1-F1
Bend Radius (during installation)	20x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Bend Radius (during Service)	10x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Repeating Bending	20xcable diameter between	Maximum loss:0.05 dB	IEC 60794-1-E6
Water Penetration	1 m length in 24 hour	No water leak	IEC 60794-1-F5
Operation Temperature	-40 to +70 °C		
Storage and Transportation Temperature	-40 to +70 °C		
Installation Temperature	-20 to +60 °C		

STANDARD SM FIBER ITU-T G 652 D

FPROPERTIES	SPECIFIED VALUES
Attenuation (max.)	0.36 dB/km (1310 nm) 0.22 dB/km (1550 nm)
MFD	9.2±0.4 μm(1310 nm) 10.3±0.5 μm(1550 nm)
Chromatic Dispersion (max)	3.5 ps/(nmxkm) (1310 nm) 17 ps/(nmxkm) (1550 nm)
Cladding diameter	125±0.3μm
Core Concentricity error (max)	0.6 μm
Zero dispersion wavelength	1300nm ≤ λ ≤ 1324nm
Cladding non-circularity (max)	%1
Coating diameter	250±10 μm
Cut Off Wavelength	≤1260nm
Proof Test	8.4 N
Proof Test strain	%1.00

216 Core SM MLT SJSA Fig 8 F/O Cable



- A1 Central Member
- A2 Optical Fiber
- A3 Loose Tube
- A4 Water Blocking Tabe
- A5 Messenger Wire
- A6 Ripcord
- A7 Glass Yarn
- A8 Corrugated Steel Tape
- A9 Outer Jacket



Ürünleriniz Güvenli Bir Şekilde
Sevkiyata Hazırlanır

Marka/Model : EK-TSFA2HWMSJSAPE0-216
Türksat Onay Kodu : TKS-FOM-08

Physical Description

216 fibers armored outdoor aerial figure 8 fiber optic cable,

- Thixotropic jelly filled loose tubes,
- Loose tubes and filler (if any) are SZ stranded around the non-metallic central strength member (FRP),
- Dry core,
- Glass yarn as strength elements,
- Corrugated steel armor,
- Outer jacket is made of medium density polyethylene,
- Ripcord is inserted for easy jackets removal.



Physical Specifications

Physical Specifications	
Fiber Type	SM G652 D
Central strength member	All-dielectric FRP
Tube material	PBT (Polybutylene Terephthalate)
Color of loose tubes	Red, Yellow, Green , Blue, Violet,White/ Red, Yellow, Green , Blue, Violet,Brown, Black, Orange, Pink
Color of fibers in per tube	Red, Yellow, Green , Blue, Violet, Brown, Black, Orange, Pink, Gray, Aqua, Natural
Tube filling compound	Thixotropic jelly
Core filling compound	-
Tape wrap	Water swellable tape
Strength elements	Glass yarns
Ripcord	Aramid cord
Identification tape marking	As a customer request
Outer jacket	Black MDPE, thickness nominal 1.8±0.2 mm. (with armor)
Surface marking	As a customer request
Armor	Corrugated steel tape
Messenger Wire	Steel Wire



SPECIFICATIONS

Fiber Count	Number of Tube	Number of Filler	Number of fiber in per tube	Central Strength Member OD (mm)	Central strength member coated OD (mm)	Tube Outer/Inner Diameter (mm)	Cable Diameter (mm)	Cable Weight (kg/km)
216	18	-	12	2.5	N/A	2.2±0.1 /1.5±0.2	17.5±0.5	340*

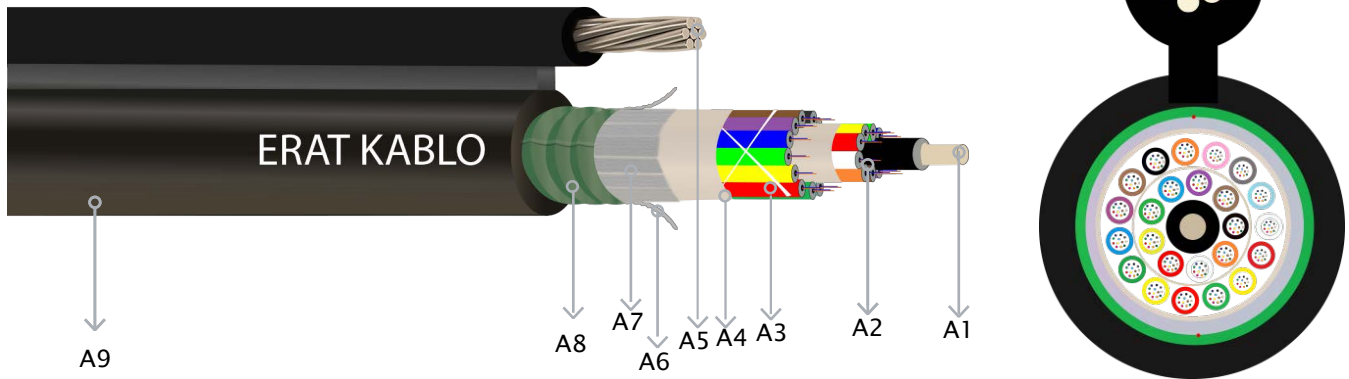
Mechanical and Environmental Properties

Physical tests	Conditions	Requirement	Standard
Tensile Strength (for 24-48 fibers)	5000 N (during Installation) 4000 N (during Operation)	Maximum fiber strain: %0.33	IEC 60794-1-E1
Impact Resistance	30Nm , 3 impacts , 300mm	No fiber break	IEC 60794-1-E1
Crush Resistance	4000 N/10cm	No fiber break	IEC 60794-1-E3
Temperature Cycling	-40 to +70 °C	Maximum loss:0.05 dB	IEC 60794-1-F1
Bend Radius (during installation)	20x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Bend Radius (during Service)	10x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Repeating Bending	20xcable diameter between	Maximum loss:0.05 dB	IEC 60794-1-E6
Water Penetration	1 m length in 24 hour	No water leak	IEC 60794-1-F5
Operation Temperature	-40 to +70 °C		
Storage and Transportation Temperature	-40 to +70 °C		
Installation Temperature	-20 to +60 °C		

STANDARD SM FIBER ITU-T G 652 D

FPROPERTIES	SPECIFIED VALUES
Attenuation (max.)	0.36 dB/km (1310 nm) 0.22 dB/km (1550 nm)
MFD	9.2±0.4 μm(1310 nm) 10.3±0.5 μm(1550 nm)
Chromatic Dispersion (max)	3.5 ps/(nmxkm) (1310 nm) 17 ps/(nmxkm) (1550 nm)
Cladding diameter	125±0.3μm
Core Concentricity error (max)	0.6 μm
Zero dispersion wavelength	1300nm ≤ ≤1324nm
Cladding non-circularity (max)	%1
Coating diameter	250±10 μm
Cut Off Wavelength	≤1260nm
Proof Test	8.4 N
Proof Test strain	%1.00

288 Core SM MLT SJSA Fig 8 F/O Cable



- A1 Central Member
A2 Optical Fiber
A3 Loose Tube
A4 Water Blocking Tube
A5 Messenger Wire
A6 Ripcord
A7 Glass Yarn
A8 Corrugated Steel Tape
A9 Outer Jacket



Ürünleriniz Güvenli Bir Şekilde
Sevkiyata Hazırlanır

Marka/Model : EK-TSFA2HWMSJSAP0-288
Türksat Onay Kodu : TKS-FOM-113

Physical Description



- 288 fibers armored outdoor aerial figure 8 fiber optic cable,
- Thixotropic jelly filled loose tubes,
- Loose tubes and filler (if any) are SZ stranded around the non-metallic central strength member (FRP),
- Dry core,
- Glass yarn as strength elements,
- Corrugated steel armor,
- Outer jacket is made of medium density polyethylene,
- Ripcord is inserted for easy jackets removal.

Physical Specifications

Fiber Type	SM G652 D
Central strength member	All-dielectric FRP
Tube material	PBT (Polybutylene Terephthalate)
Color of loose tubes	Red, Yellow, Green , Blue, Violet, Brown, Black, Orange, White / Red, Yellow, Green , Blue, Violet, Brown, Black, Orange,Pink, Gray, Aqua, White Red-Black, Yellow-Black, Green-Black
Color of fibers in per tube	Red, Yellow, Green , Blue, Violet, Brown, Black, Orange, Pink, Gray, Aqua, Natural
Tube filling compound	Thixotropic jelly
Core filling compound	-
Tape wrap	Water swellable tape
Strength elements	Glass yarns
Ripcord	Aramid cord
Identification tape marking	As a customer request
Outer jacket	Black MDPE, thickness nominal 1.8±0.2 mm. (with armor)
Surface marking	As a customer request
Armor	Corrugated steel tape
Messenger Wire	Steel Wire



SPECIFICATIONS

Fiber Count	Number of Tube	Number of Filler	Number of fiber in per tube	Central Strength Member OD (mm)	Central strength member coated OD (mm)	Tube Outer/Inner Diameter (mm)	Cable Diameter (mm)	Cable Weight (kg/km)
288	24	-	12	2.5	4.3	2.2±0.1 / 1.5±0.2	20.0±0.5	425*

Mechanical and Environmental Properties

Physical tests	Conditions	Requirement	Standard
Tensile Strength (for 24-48 fibers)	5000 N (during Installation) 4000 N (during Operation)	Maximum fiber strain: %0.33	IEC 60794-1-E1
Impact Resistance	30Nm , 3 impacts , 300mm	No fiber break	IEC 60794-1-E1
Crush Resistance	4000 N/10cm	No fiber break	IEC 60794-1-E3
Temperature Cycling	-40 to +70 °C	Maximum loss:0.05 dB	IEC 60794-1-F1
Bend Radius (during installation)	20x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Bend Radius (during Service)	10x cable diameter	Maximum loss:0.05 dB	IEC 60794-1-E11
Repeating Bending	20xcable diameter between	Maximum loss:0.05 dB	IEC 60794-1-E6
Water Penetration	1 m length in 24 hour	No water leak	IEC 60794-1-F5
Operation Temperature	-40 to +70 °C		
Storage and Transportation Temperature	-40 to +70 °C		
Installation Temperature	-20 to +60 °C		

STANDARD SM FIBER ITU-T G 652 D

FPROPERTIES	SPECIFIED VALUES
Attenuation (max.)	0.36 dB/km (1310 nm) 0.22 dB/km (1550 nm)
MFD	9.2±0.4 μm(1310 nm) 10.3±0.5 μm(1550 nm)
Chromatic Dispersion (max)	3.5 ps/(nmxkm) (1310 nm) 17 ps/(nmxkm) (1550 nm)
Cladding diameter	125±0.3μm
Core Concentricity error (max)	0.6 μm
Zero dispersion wavelength	1300nm ≤ ≤1324nm
Cladding non-circularity (max)	%1
Coating diameter	250±10 μm
Cut Off Wavelength	≤1260nm
Proof Test	8.4 N
Proof Test strain	%1.00

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