

CONDUCTOR	Guinea ACSR/AW (Aluminium clad steel)		Offer
PLS Cadd Cable Name	guinea_acsr_aw.wir		
Description	159 kcmil 12/7 Strands GUINEA ACSR AW		
Cable Type	ACSR-AW		
Aluminium Stranding	12/2.92		
Steel Stranding (Aluminium clad)	7/2.92		
 12 Al/7 St			
	Unit	Value	Offer
Cross Section Area	mm ²	127.24	
Unit Weight (kg/kmm)	kg/km	587	
Outside Diameter (mm)	mm	14.6304	
Ultimate tensile strength (kN)	kN	68	
Initial Modulus of Elasticity	kN/mm ²	71	
Final Modulus of Elasticity	kN/mm ²	108	
Coefficient of Linear Expansion	x10 ⁻⁶ /°C	15.61	
Max DC Resistance at 20°C	ohms/km	0.3003	
Length of conductor per drum	m	2000	
Permanent elongation due to creep after 10 years	mm/km	266	
Length of conductor per drum	m	2438.4	
Drum type		NEMA Class 2 Wood NR 48.28	
Net Weight of Drum	kg	160	
Gross Weight of Drum	kg	1591.3408	
Flange Diameter	in	48	
Transverse Length	in	28	
Drum Diameter	in	24	
Type of grease		low friction ant-corrosion	
Mass of grease per km as per case 2 of IEC 61089	kg	8.53	
Termite protection		Termitex®	
Ampacity of Conductor (temperature of 75°C ambient temperature 25°C, emissivity 0.5, wind 0.6./sec., in sun)	A	372	
Will all tests in relevant standard specification will be carried out?		Yes	

SHIELD WIRE		7 x 3.35 Galvanised HSS steel Wire		Offer
PLS Cadd Cable Name		St_7/3.35		
Description		7 x 3.35mm Galvanised stranded 1100MPa		
Cable Type		HSS Steel Galv		
Steel Stranding		7/3.35		
				
		Unit	Value	Offer
Cross Section Area		mm ²	80.57	
Cross-section Area ACS		mm ²	47.01	
Overall cross section		mm ²	61.7	
Unit Weight (kg/km)		kg/km	485.22	
Outside Diameter (mm)		mm	10.05	
Ultimate Tension (kN)		kN	67.5	
Final Modulus of elasticity		kN/mm ²	19.3	
Coefficient of Linear Expansion		x10 ⁻⁶ /°c	11.52	

OPGW		OPGW 48 Fiber AlumaCore AC-53/449		Offer
PLS Cadd Cable Name		AC-53-449.wir		
Description		10.5mm, 48 Fiber OPGW		
Cable Type		HSS Steel Galv		
Fibre core enclosure		Aluminium pipe		
Outer Stranding		Alluminium alloy, Aluminium Clad Steel		
				
		Unit	Value	Offer
Cross Section Area		mm ²	To match Shield wire	
Unit Weight (kg/km)		kg/km	To match Shield wire	
Outside Diameter (mm)		mm	To match Shield wire	
Ultimate Tension (kN)		kN	To match Shield wire	
Final Modulus of elasticity		Mpa	To match Shield wire	

Optical Fibre Requirement	Unit	Value	Offer
Attenuation			
Attenuation coefficient at 1310nm(B1.1)	dB/km	≤0.35	
Attenuation coefficient at 1550nm(B1.1)	dB/km	≤0.21	
Attenuation value of (1285~1330) nm range relative to 1310nm	dB/km	≤0.05	
Attenuation value of (1480~1580) nm range relative to 1550nm	dB/km	≤0.05	
OH absorption peak (1383±3) attenuation (dB/km)	dB/km	≤0.35	
1310nm and 1550nm attenuation point discontinuity	dB	≤0.1	

Attenuation difference at both ends (dB/Km)	dB/km	≤ 0.05	
1310nm(dB)	dB/km	≤ 0.35	
1550nm(dB)	dB/km	≤ 0.21	
Mode field diameter			
1310nm(dB)	μm	9.2 ± 0.4	
1550nm(dB)	μm	10.4 ± 0.5	

POLE EARTHING	Counterpoise Earth Galvanised Flat steel strip	Offer
Description	Galvanised Flat steel strip counterpoise earth.	
Dimensions of Earth Strap	6m x 50mm x 50mm x 5mm	
Connection Pole end.	Bolted to earth lug on the pole using M12 gavanised Bolt, nut and washer.	
Optional addidinal Earth Connection Electrode End if 20 ohms is not achievable.	Bolted connection to tinned 16mm copper earth spike using a parallel groove clamp.	

revised on 16 Jan 2024