Sterlite

ACSS

CONDUCTOR CATALOGUE

Sterlite

ACSS DOG

OVERVIEW

A high-performance ACSS conductor, ACSS Dog delivers superior ampacity, minimal sag, and long-span reliability for demanding high-voltage transmission applications.

APPLICATIONS

- Renewable Energy Transmission
- Upgradation of Distribution lines
- Low & Medium Voltage Transmission Lines

FEATURES & BENEFITS

High Ampacity

Operates at elevated temperatures

Enhanced Electrical Efficiency

Fully annealed aluminum strands reduce resistance and energy losses

Strong Mechanical Support

Steel core withstands wind, ice, and thermal stresses effectively

Corrosion Resistant

Advanced materials improve durability and service life

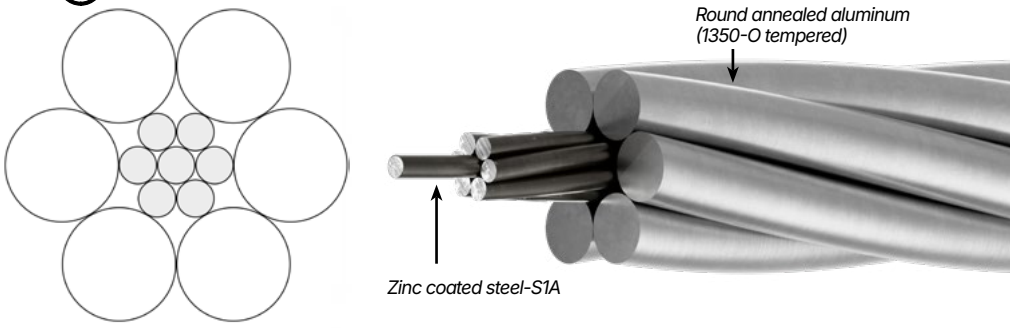
Optimized Current Capacity

Designed to carry higher ampacity for existing line upgrades

Installation Requirements

Softer aluminum strands need specialized handling and tools

CROSS SECTION



APPLICABLE STANDARDS

- ASTM B609 · B856
- BS BS EN 50540
- IEC IEC 62641, IEC 63248

TECHNICAL SPECIFICATIONS

Conductor	ACSS DOG (207 kcmil)	
Total Sectional Area	118.53 mm^2	0.1837 in^2
Aluminum sectional area	104.98 mm^2	0.1627 in^2
Steel Core sectional area	13.55 mm^2	0.021 in^2
Construction/Stranding details		
No.of Aluminum wires & diameter	6 Nos. x 4.72 mm	6 Nos. x 0.186 in
No. of Steel wires & diameter	7 × 1.57 mm	7 × 0.062 in
Overall diameter	14.15 mm	0.56 in.
Weight	0.394 kg/m	0.265 lb/ft
Rated strength of Conductor	24.21 kN	5443 lbs
Rated strength of Core	18.16 kN	4083 lbs
DC Resistance @ 20°C (68°F)	0.2600 Ω/Km	0.4184 Ω/mile
Current Capacity @ 180°C (356°F)	655 A	
Current Capacity @ 200°C (392°C)	627 A	
Max. Operating Temperature	180°C	356°F
Direction of lay	Right hand	
Coefficient of thermal expansion	19.42 × 10^{-6}/°C	10.79 × 10^{-6}/°F
Final modulus of elasticity	69.67 Gpa	10104.8 ksi

Note: Current capacity based on referenced conductor temp., 0.6 m/s (2 ft/s) wind, 0 m (0 ft) Elevation, 0.5 Emissivity, 0.5 absorptivity, 25°C (77°F) Ambient temperature, 1033 W/m^2 (96 w/ft^2) solar radiation.

Sterlite

ACSS TW SUWANNEE

OVERVIEW

A high-efficiency ACSS conductor, ACSS/TW Suwannee maximizes ampacity, reduces sag, and improves durability with a compact trapezoidal aluminum design and corrosion-resistant steel core.

APPLICATIONS

- Renewable Energy Transmission
- Medium, High and Extra High Voltage Transmission
- Extreme Weather Conditions

FEATURES & BENEFITS

High Ampacity & Low Sag

Operates up to 250°C, allowing higher current with minimal sag

Enhanced Electrical Efficiency

Fully annealed aluminum strands reduce resistance and power losses

Compact Trapezoidal Design

Optimized wire shape increases aluminum area for better ampacity

Reduced Line Losses

Higher aluminum content lowers transmission resistance and energy loss

Corrosion Resistant

Zinc-Aluminium-Mischmetal alloy coated steel core and aluminum strands improve durability

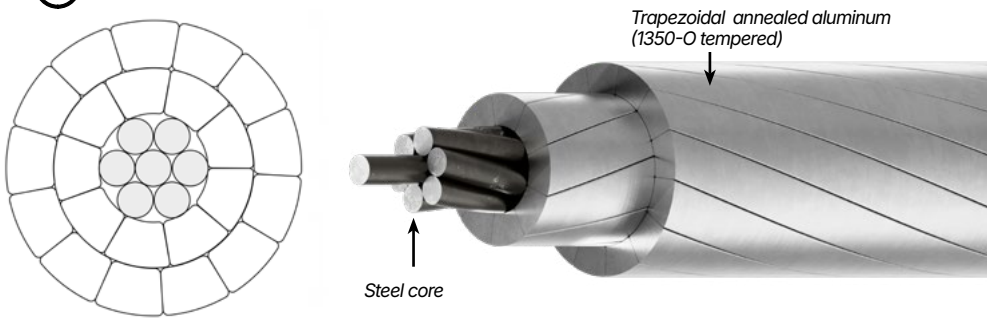
Extended Service Life

Resists mechanical fatigue and vibration, ensuring long-term reliability

Specialized Installation

Requires trained personnel and tools due to flexible, trapezoidal strands

CROSS SECTION



APPLICABLE STANDARDS

B609 · B802 · B857 | BS EN 50540 | IEC 63248

TECHNICAL SPECIFICATIONS

Conductor	ACSS/TW SUWANNEE (960 kcmil)	
Total Sectional Area	565.3 mm^2	0.8762 in^2
Aluminum sectional area	486.2 mm^2	0.7536 in^2
Steel Core sectional area	79.1 mm^2	0.1225 in^2
Construction/Stranding details		
No.of Aluminum wire & *Equivalent diameter	22 Nos. x 5.305*mm	22 nos. x 0.2088*in
No. of Steel core wires & diameter	7 × 3.792 mm	7 × 0.149 in
Overall diameter	28.19 mm	1.11 in.
Weight	1.9597 kg/m	1.317 lb/ft
Rated strength of Conductor	136.56 kN	30700 lbs
Rated strength of Core	109.1 kN	24527 lbs
DC Resistance @ 20°C	0.0564 Ω/Km	0.0907 Ω/mile
Current Capacity @ 210°C (410°F)	1702 A	
Max. Operating Temperature	250°C	482°F
Direction of lay	Right hand	
Coefficient of thermal expansion	18.93 × 10^{-6}/°C	10.52 × 10^{-6}/°F
Final modulus of elasticity	74.6 Gpa	10820 ksi

Note: Current capacity based on referenced conductor temp., 0.56 m/s (1.84 ft/s) wind, 0m (0 ft) Elevation, 0.45 emissivity, 0.80 absorptivity, 45°C (113°F) Ambient temperature, 1045 W/m^2 (97.08 w/ft^2) solar radiation

Sterlite

Corporate Office

5th Floor, RMZ Infinity, Plot No. 15,
Udyog Vihar – IV, Gurugram - 122015,
Haryana, India

Manufacturing Units

Haridwar
Sector-5, Vardhman Industrial Estate,
Behind Patanjali Yogpeeth, Haridwar, Uttarakhand 249 405

Jharsuguda
At-Bhurkhamunda, PO - Kalimandir Road,
District - Jharsuguda, Odisha 768 202

Piparia
Survey NO.209, Phase -II, Piparia, Piparia
Industrial Estate, Silvassa, Maharashtra 396 230

Rakholi
Survey NO.99/2/22, & 23, Rakholi, Madhuban Dam
Road Rakholi, Silvassa, Maharashtra 396 230

For any queries or suggestions

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