

COPPERSTEEL® WIRES AND CABLES - 30% IACS

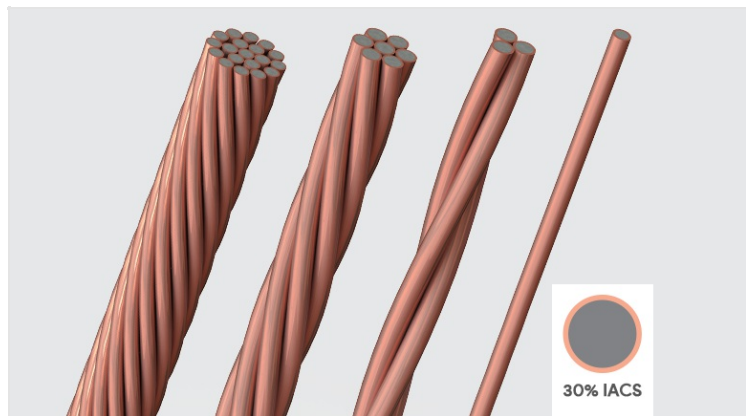
CS30-18-1F

Description

COPPERSTEEL is a bimetallic conductor that combines the mechanical properties of steel with the high conductivity and corrosion resistance of copper. Created from a continuous cladding process where the metals are joined together on an atomic scale to produce a bimetallic material with the best of both metals, it is the smartest option for grounding grid, counterpoise, grounding conductor and various other applications.

GROUNDING AND LIGHTNING PROTECTION SYSTEMS: Properly designed ground systems are essential to adequately discharge extremely high currents, directing them to the ground during lightning surges and short-circuit. The **COPPERSTEEL** conductors with steel core and copper cladding is the best choice for power generation, transmission and electrical distribution grounding and lightning systems. It offers equivalent performance to bare copper for grounding applications and much higher performance than zinc plated steel for lightning protection, thanks to its longer service life.

TRANSMISSION GROUNDING SYSTEMS: For lightning protection of overhead transmission lines, grounding and earthing systems are vital. **COPPERSTEEL** conductors offer high strength and corrosion resistance for overhead and grounding applications. On overhead ground wire application, where discharge time are in the order of microseconds, the 21% and 30% IACS **COPPERSTEEL** conductors have equivalent performance to copper and much higher performance than hot dip galvanized steel wires. When used as counterpoised, the **COPPERSTEEL** copper cladding technology ensures 40 to 50 years of lifetime, in all types of soil (regardless of pH), up to 6 times more durability than hot dip galvanized steel.



Datasheet

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|---|------------|
| Código INTELLI | CS30-18-1F |
| Nominal Cross Section (mm²) | - |
| Effective Cross Section (mm²) | 0,82 |
| Conductor Characteristics | |
| Qtd. De Fios | 1 |
| Diâmetro dos Fios (mm) | 1,02 |
| Diâmetro do Cabo (mm) | - |
| Seção (AWG/MCM) | 18 |
| Physical Parameters | |
| Área do Cobre (%) | 25 |
| Área do Aço (%) | 75 |

| | |
|--|-----------|
| Massa Específica (g/cm ³) | 8,08 |
| Mechanical Characteristics | |
| Peso Nominal (kg/km) | 6,60 |
| Módulo de Elasticidade (GPa) | 183 |
| Coef. de Dilatação Linear (1/°C) | 1,84 E-05 |
| Carga de Ruptura - LCA (daN) | 26,0 |
| Electrical Characteristics | |
| Coef. de Variação de Resistência (1/°C) | 0,00378 |
| Reatância Indutiva - 60Hz (ohms/km) | - |
| Reatância Capacitiva - 60Hz (ohms/km) | - |
| Capacidade de Corrente em Regime Permanente - 75°C (A) | - |
| Capacidade de Corrente em CC - 50ms (A) | - |
| Capacidade de Corrente em CC - 100ms (A) | - |
| Capacidade de Corrente em CC - 0,5s (A) | - |
| Resistência Máxima à 20°C em CC (ohms/km) | 70,332 |
| Package | |
| Tipo de Bobina | - |
| Lance Nominal (m) | - |
| Massa Líq. por Bobina (kg) | - |
| Massa Bruta da Bobina com Fechamento (kg) | - |