

COPPERSTEEL® WIRES AND CABLES - 40% IACS

CS40-50-3F

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.

SUBSTATION GROUNDING SYSTEMS: For grounding applications, the COPPERSTEEL conductors with 40% and 53%, IACS have equivalent fusing resistance performance to bare copper cable with same cross section, against short-circuit up to 1s rate duration. In practice, this is possible because the steel core allows the COPPERSTEEL conductor to work over a wider temperature range than copper, without compromising its physical characteristics.

POWER GENERATION GROUNDING SYSTEMS (RENEWABLE): The best grounding solution for wind farms, photovoltaic systems and hydroelectric plants. Performance equivalent to copper and superior to hot dip galvanized steel, ensuring maximum performance in the grounding of equipments (wind turbines, transformers, photovoltaic plates, etc) and civil works (anchor bolts, powerhouses, substations, among others), in addition to reducing the potential for theft.



Datasheet

Código INTELLI	CS40-50-3F
Nominal Cross Section (mm²)	50
Effective Cross Section (mm²)	50,30
Conductor Characteristics	
Qtd. De Fios	3
Diâmetro dos Fios (mm)	4,62
Diâmetro do Cabo (mm)	9,95
Seção (AWG/MCM)	1/0
Physical Parameters	
Área do Cobre (%)	35
Área do Aço (%)	65
Massa Específica (g/cm ³)	8,20
Mechanical Characteristics	
Peso Nominal (kg/km)	415,00
Módulo de Elasticidade (GPa)	176

Coef. de Dilatação Linear (1/°C)	1,90 E-05
Carga de Ruptura - LCA (daN)	1338
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)	217
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)	0,857
Package	
Tipo de Bobina	-
Lance Nominal (m)	-
Massa Líq. por Bobina (kg)	-
Massa Bruta da Bobina com Fechamento (kg)	-