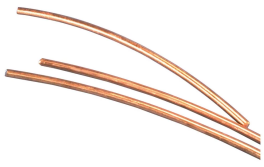
We connect and protect

nVent ERICO Cu-Bond Round Conductor

Power Utilities



For decades, nVent ERICO has provided the market with high quality copper-bonded ground rods. nVent ERICO has taken that same concept in ground rods and made this into a revolutionary new grounding conductor. The core of the nVent ERICO Cu-Bond Round Conductor is a low carbon steel grade for improved flexibility in the field. The steel core is plated with nickel then electro-plated with a coating of copper. This electro-plating process helps ensure a long-lasting molecular bond between the copper layer and the steel.

The steel core of the conductor provides theft-deterrent benefits, making the conductor difficult to cut with hand tools. With this steel core, nVent ERICO Cu-Bond Round Conductor is a cost-effective alternative to 100% copper conductor. The copper surface of the conductor provides high conductivity and corrosion resistance properties.

Above grade, the unique properties of nVent ERICO Cu-Bond Round Conductor make it ideal for both horizontal and vertical placement. The conductor is well-suited as a lightning protection conductor when applied in accordance with the IEC 62305-3 Edition 2.0 standard.

In the utility industry, the product can be used as a distribution down-lead conductor or as part of a bonding kit for substation fences or equipment ground risers back to the grid. In telecom applications, the product can be used to connect an equipment ground to the ground grid, as a riser (down-lead) for towers, or as a grounding conductor for datacenter mesh bonding. They are also well suited for rail applications such as trackside bonding conductors and stray current conductors, grounding kits for trackside equipment, electrical traction power, as well as in substation, wayside shelters, and communication antenna equipment.

Below grade, nVent ERICO Cu-Bond Round Conductors are ideal as earthing and bonding conductors where copper theft may occur. They may be used as a buried ground grid conductor or electrode for wireless telecom towers, power distribution and transmission grounding in utility substations, large scale ground mount solar farms, petro-chemical and mining infrastructure in industrial facilities,

and railway applications. The conductor also can be used as an interconnecting grounding conductor between wind towers or as a grounding grid at the base of a wind tower.

CERTIFICACIONES

CARACTERÍSTICAS

- Theft-deterrent; steel core is hard to cut with hand tools
- Cost-effective; copper bonded to a steel core minimizes the amount of copper in the cable
- Superior corrosion resistance; application life of typically 30-40 years in most soil conditions
- Copper-bonded coating will not crack or tear when the conductor is bent
- High resistance to corrosion and provides a low-resistance path to ground
- nVent ERICO Cu-Bond Round Conductor is marked every meter (3.28') for easy measurement in the field
- Meets the requirements of IEC® 62305-3 Edition 2 and IEC/EN 62561-2 for lightning protection applications
- nVent ERICO Cu-Bond Round Conductors are UL certified to IEC® 62561-2

ESPECIFICACIONES

Table 1/1

Número de catálogo	Espesor del recubrimiento	Equivalencia de capacidad de fusión	Código de conductor Cadweld de nVent ERICO	Peso por unidad	Detalles de la certificación
CBSC8	254 µm	25 mm²	T1	39 kg	IEC® 62561-2

DETALLES ADICIONALES DEL PRODUCTO

Resistance per unit length measurements made in mΩ/m, CBSC compared with respect to AWG/Metric.

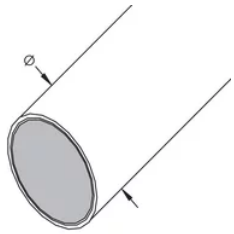
The IEEE® 837 standard (Annex C) provides a method of calculating the fusing current for conductors. This chart is a reference of the calculations for copper-bonded steel conductor according to the IEEE 837 standard. This information is for reference only.

Comparación del tamaño físico del conductor		
Tamaño de conductor	**Diámetro aproximado**	**Sección transversal**
25 mm²	6,76 mm	-
35 mm²	7,65 mm	-
CBSC8	8,00 mm	50,27 mm²
50 mm²	8,89 mm	-
CBSC10	10,00 mm	78,52 mm²
70 mm²	10,69 mm	-
95 mm²	12,47 mm	-
CBSC13	13,20 mm	138,07 mm²
CBSC14	14,20 mm	158,90 mm²
120 mm²	14,22 mm	-
CBSC16	15,70 mm	199,84 mm²
150 mm²	15,75 mm	-
185 mm²	17,65 mm	-
CBSC18	17,70 mm	243,27 mm²

Comparación de conductividad				
Número de pieza	AWG (Ω/km)	Resistencia CBSC por Comparación de longitud	mm² (Ω/km)	Resistencia CBSC por Comparación de longitud
CBSC18	1/0 AWG	118,52 %	50 mm²	110,82 %
	2 AWG	74,54 %	35 mm²	77,57 %
CBSC16	2 AWG	102,20 %	35 mm²	106,36 %
	4 AWG	64,27 %	25 mm²	75,97 %
CBSC14	2 AWG	137,78 %	25 mm²	102,42 %
	4 AWG	86,65 %	16 mm²	65,55 %
CBSC13	2 AWG	134,46 %	25 mm²	99,95 %
	4 AWG	84,56 %	16 mm²	63,97 %
CBSC10	4 AWG	132,25 %	16 mm²	100,05 %
	6 AWG	83,17 %	10 mm²	62,53 %
CBSC8	6 AWG	107,85 %	16 mm²	129,73 %
	8 AWG	67,83 %	10 mm²	81,08 %

Corriente de fusible Irms (kA) - IEEE® 837 Anexo C							
Tipo de conductor Revestido con cobre electrolítico, núcleo de acero, varillaa		**CBSC8**	**CBSC10**	**CBSC13**	**CBSC14**	**CBSC16**	**CBSC18**
Sección transversal del conductor en mm2	A	50.265	78.52	138.07	158.903	199.84	243.27
Temperatura inicial del conductor en °C	Ta	40	40	40	40	40	40
Tiempo de flujo de corriente en segundos	tc	2	2	2	2	2	2
Temperatura máxima permisible en °C	Tm	1084	1084	1084	1084	1084	1084
Coeficiente térmico de resistividad a temperatura de referencia Tr	ar	0.00378	0.00378	0.00378	0.00378	0.00378	0.00378
Resistividad del conductor de puesta a tierra a temperatura de referencia Tr en m&-cm	rr	8.621	8.621	8.621	8.621	8.621	8.621
1/a0 o (1/ar) – Tr in °C	K0	245	245	245	245	245	245
Factor de capacidad térmica en julios/cm3/°C	TCAP	3.846	3.846	3.846	3.846	3.846	3.846
Conductividad del material	%	24.5	20.4	18.8	15.9	16.3	17.7
Cálculo de la corriente de fusible	ß	84.73	84.73	84.73	84.73	84.73	84.73
	I	4.79	7.48	13.16	15.15	19.05	23.19
	I90 %	4.31	6.74	11.84	13.63	17.14	20.87
	I80 %	3.83	5.99	10.53	12.12	15.24	18.55

DIAGRAMAS



ADVERTENCIA

Los productos nVent deben instalarse y usarse solo como se indica en las hojas de instrucciones y materiales de capacitación del producto nVent. Instruction sheets are available at www.nvent.com and from your nVent customer service representative. La instalación incorrecta, el mal uso, la aplicación incorrecta u otras fallas en el seguimiento completo de las instrucciones y advertencias de nVent pueden causar el mal funcionamiento del producto, daños a la propiedad, lesiones corporales graves y la muerte y/o anular la garantía.

⚠ WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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