

PRODUCT DATA SHEET

Grounding copper conductors

One Bridge Plaza North Suite 260 | Fort Lee, NJ 07024 | Tel 201 242 9906 | Fax 201 242 9926

SCOPE: This specification covers bare and tin plated solid and concentric lay stranded conductors made from round copper wires of hard, medium hard, soft or annealed temper. Stranded conductors shall be constructed with central core surrounded by one or more layers of helically laid wires.

1. Specifications

- ASTM B 1 – Hard-drawn copper wire
- ASTM B 2 – Medium hard drawn copper wire
- ASTM B 3 – Soft or Annealed copper wire
- ASTM B 8 – Concentric-lay-stranded copper conductors, hard, medium-hard or soft
- ASTM B 33 – Tinned soft or annealed copper wire

2. Applications

The conductors are primarily used for grounding in Wind Industry (grounding of turbine, tower grid, transformers, substations and collection systems etc.) The conductors could be applicable for grounding in any commercial, industrial, residential and utility grounding systems.

3. Conductor dimensions and parameters.

Conductor size, AWG/kcmil	Number of strands	Strand OD, inch	Conductor OD, inch	Conductor weight, lbs/Mft	D.C resistance of soft drawn copper (annealed)@ 20°C(Q/MFT)	Allowable Ampacity*
8	Solid	0.1285	0.1285	50	0.628	95
8	7	0.0486	0.146	51	0.6408	95
6	Solid	0.162	0.167	79	0.385	125
6	7	0.0612	0.184	81	0.4030	130
4	Solid	0.2043	0.2043	126	0.249	170
4	7	0.0772	0.232	129	0.2534	170
2	7	0.0974	0.292	205	0.1578	230
1	7	0.1093	0.328	259	0.1252	265
1/0	7	0.1228	0.368	326	0.1002	310
2/0	19	0.0837	0.419	411	0.07949	355
4/0	19	0.1055	0.528	653	0.04999	480
250	37	0.0822	0.575	722	0.04231	530
500	37	0.1162	0.813	1542	0.02116	810
600	37	0.127	0.891	1853	0.01763	910
600	61	0.0992	0.893	1853	0.0177	TBD
750	61	0.1109	0.998	2316	0.01410	1040
1000	61	0.128	1.152	3086	0.01058	1240

*Ampacity based on 75°C conductor temperature, 25°C ambient temperature, 2ft/sec wind velocity.

Revision	Description	WTEC part number	Date	Submitted By
B		BCXXXXX	06/11/09	OM
C	D.C resistance and	BCXXXXX	09/23/10	AD