

PRODUCT DATA SHEET

Aluminum 8000 series wind tower power cables (standard grade)

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

SCOPE: This specification covers the construction requirements for UL listed single conductors of RHHW/RHW-2 types, consisting stranded aluminum alloy conductor material (AA 8000 series) and insulated with Crosslinked Polyethylene (XLPE). The cable is designed in accordance with UL 44 and ASTM B801 standards. Cables are rated for 2000 volts, 90⁰C wet or dry. The cable is suitable for Direct Burial.

1. Conductor.
 - 1.1. Metal of all conductors shall be recognized aluminum alloy conductor material, AA 8000 series with chemical composition in accordance to UL 44 (Annex C) and ASTM B800.
 - 1.2. Major conductor dimensions are referenced in the table below.
 - 1.3. Conductor shall be reverse concentric compressed (compacted) strand with left-hand direction in outside layer (ASTM B801).
 - 1.4. Conductor shall be made by H1X/H2X temper with rated strength exceed the minimal number specified in the table.

2. Insulation
 - 2.1. Conductor shall be insulated with Crosslinked Polyethylene (XLPE), meeting all requirements of UL 44 standard.
 - 2.2. Minimal insulation thickness at any point shall not be less than 90% of the minimal average thickness, specified in the table.
 - 2.3. Voltage withstand test in water shall be applied during 1 min by 10kV AC for cables smaller 500 Kcmils and 11kV AC for bigger sizes.
 - 2.4 Protective covering (jacket) is not obligatory for this cable type.

3. Testing.

The cable shall be tested for all obligatory requirements of UL 44 standard and for next optional:

 - 3.1 FT-2 horizontal flame test;
 - 3.2 Cold bend test applied at -25⁰C;
 - 3.3 Oil resistance PR 1 (at 60⁰C);
 - 3.4 Oil resistance PR 2 (at 75⁰C)

4. Surface marking. Legend (white surface ink print): WTEC (UL) E#(____)xxx KCMIL(mm²) (ACM) (class _) RHH/RHW-2 2kV CT FT2 OIL RES I AND II 90⁰C WET OR DRY -25⁰C DIRECT BURIAL- (CSA)LL#(____)CIC RW90 xxxx KCMIL (mm²)(-25⁰C) OIL RES TC FT2-XLPE 2KV

Revision	Description	WTEC part number	Date	Submitted By
B	Revised	RHH/RHW2 2KV ACM8000 (standard)	06/25/2010	OM
C	Revised	Added Direct Burial	11/16/2010	SS



PRODUCT DATA SHEET

Aluminum 8000 series wind tower power cables (standard grade)

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

Size, Kcmils	Class	Number of wires	Single wire diameter, mils	Conductor OD, inch		Rated strength (min), lbs	Insulation thickness, mils	Insulation resistance 15°C (min) MΩ/Mft	Conductor or DCR Ω/Mft	Appr. Overall diameter for compacted, inch	Min bending radius, inch	Appr. Total weight Lb/kft	Ampacity (single conductor in air)
				compressed	compacted								
4/0	C	37	75.6	0.513	0.475	2063	90	1340	0.082	0.664	3.1	267	320
	B	19	105.5	0.512	0.475	2109	90	1340	0.082	0.664	3.1	267	320
300	B	37	90	0.611	0.570	2921	105	1280	0.0578	0.792	3.3	282	400
	C	61	70.1	0.611	0.570	2889	105	1280	0.0578	0.792	3.3	282	400
	D	91	57.4	0.611	0.570	2889	105	1280	0.0578	0.792	3.3	282	400
350	B	37	97.3	0.661	0.616	3350	105	1200	0.0495	0.885	3.5	329	440
	C	61	75.7	0.661	0.616	3320	105	1200	0.0495	0.885	3.5	329	440
	D	91	62	0.661	0.616	3320	105	1200	0.0495	0.885	3.5	329	440
400	B	37	104	0.706	0.659	3858	105	1130	0.0434	0.881	3.7	376	480
	C	61	81	0.706	0.659	3816	105	1130	0.0434	0.881	3.7	376	480
	D	91	66.3	0.706	0.659	3816	105	1130	0.0434	0.881	3.7	376	480
500	B	37	116.2	0.789	0.736	4818	105	1095	0.0347	0.958	4.3	595	530
	C	61	90.5	0.791	0.736	4818	105	1095	0.0347	0.958	4.3	595	530
	D	91	74.1	0.791	0.736	4872	105	1095	0.0347	0.958	4.3	595	530
600	B	61	99.2	0.866	0.813	5787	120	1060	0.0289	1.028	5.6	565	596
	C	91	81.2	0.866	0.813	5787	120	1060	0.0289	1.028	5.6	565	596
	D	127	68.7	0.866	0.813	5787	120	1060	0.0289	1.028	5.6	565	596
900	B	61	121.5	1.06	0.999	8586	120	890	0.0193	1.248	6.6	847	785
	C	91	99.4	1.06	0.999	8586	120	890	0.0193	1.248	6.6	847	785
	D	127	84.2	1.06	0.999	8586	120	890	0.0193	1.248	6.6	847	785
1000	B	61	128	1.117	1.060	9540	120	850	0.0173	1.302	6.8	941	845
	C	91	104.8	1.117	1.060	9540	120	850	0.0173	1.302	6.8	941	845
	D	127	88.7	1.117	1.060	9540	120	850	0.0173	1.302	6.8	941	845

Revision	Description	WTEC part number	Date	Submitted By
B	Revised	RHH/RHW2 2KV ACM8000 (standard)	06/25/2010	OM
C	Revised	Added Direct Burial	11/16/2010	SS