

Loresco PowerSetTM



When the specification calls for a hard setting grounding material PowerSetTM is the product of choice. PowerSetTM is compatible with all standard copper grounding systems and standard field applications. It is an economical permanent solution to difficult grounding problems in hard to deal with areas. PowerSetTM is manufactured from environmentally safe materials and is extremely stable. When mixed with water or exposed to moisture, PowerSetTM attains the hardening characteristics of cement while retaining its highly conductive properties. PowerSetTM will remain highly conductive during a drought or when exposed to arctic temperatures. Because it does not have any shrinkage or expansion properties it will remain in constant contact with the earth.

PowerSetTM can be poured in dry or pumped in slurry form. No tamping is required. It is very worker friendly. No special tools are required.

Advantages:

- Positive low resistance, electrical connection to the earth.
- Compatible with all copper grounding systems.
- Does not contain any hazardous chemicals.
- Will attain a hardened state.
- Will not leech into the ground or wash away.
- Never needs recharging.
- Electrically conductive.
- Environmentally friendly.
- Stable permanent ground for the life of the grounding system.
- Contains a corrosion inhibitor to protect copper.
- Will not expand or experience any shrinkage.
- Not affected by freezing.
- Simple to install.
- Excellent shelf life with no performance effects.

To calculate the amount of material required to fill a trench. First, determine your desired thickness of PowerSetTM. Second, move to the right until you are under the known width of the trench. This number will be the weight of the material lbs/linear ft. Take this number and multiply by the length of the trench in feet. Your answer will be the amount of PowerSetTM material required to fill the trench to the desired level in lbs.

		Material Required Per Linear Foot of Trench										
		WIDTH OF TRENCH (INCHES)										
THICKNESS OF PowerSet™ (INCHES)		4	6	8	10	12	14	16	18	20	22	24
		2	3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.2	18.0	19.7
3	5.4	8.1	10.8	13.5	16.2	18.8	21.5	24.2	26.9	29.6	32.3	
4	7.2	10.8	14.4	18.0	21.5	25.1	28.7	32.3	35.9	39.5	43.1	
5	9.0	13.5	18.0	22.4	26.9	31.4	35.9	40.4	44.9	49.4	53.9	
6	10.8	16.3	21.5	26.9	32.3	37.7	43.1	48.5	53.9	59.2	64.6	
7	12.6	19.0	25.1	31.4	37.7	44.0	50.3	56.5	62.8	69.1	75.4	
8	14.4	21.7	28.7	35.9	43.1	50.3	57.4	64.6	71.8	79.0	86.2	
9	16.3	24.4	32.3	40.4	48.5	56.5	64.6	72.7	80.8	88.9	96.9	
10	18.1	27.1	35.9	44.9	53.9	62.8	71.8	80.8	89.8	98.7	107.7	

Example:

Thickness = 6 inches

Width = 12 inches

Answer = 32.3 lbs/linear ft

32.3 lbs/linear ft x 50 ft of trench = 1615 lbs of PowerSet™

Vertical Installation: Drill or dig the earth hole to the desired diameter and depth. Suspend groundrod in center of hole to be filled. Pour PowerSet™ until desired level is obtained. Remove excess water prior to pumping. If necessary, PowerSet™ may be pre-mixed and pumped under water.

Dry Volume of PowerSet vs. Hole Size		Ground Resistance Comparison of Bare Rod vs.	
HOLE SIZE	LBS. OF POWERSSET PER FT.	HOLE DIAMETER WITH 5/8 BY 10' ROD IN CENTER OF 15' HOLE	PERCENT RESISTANCE COMPARED TO ROD ONLY (100%)
4"	5.7	4"	52%
6"	12.8	6"	47%
8"	22.7	8"	44%
10"	35.5	10"	42%
12"	51.1	12"	40%

Horizontal or Grid Construction: Entire grounding system should be surrounded by PowerSet™. Conductors should be insulated as they exit the PowerSet™ column. PowerSet™ should be used as a ground enhancement material when a setting fill is specified.

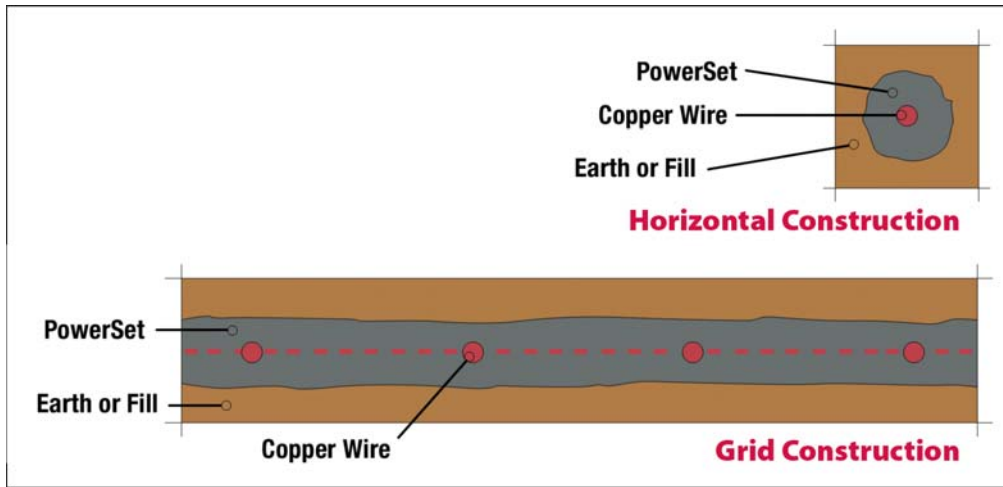
Horizontal Construction:

- Pour into horizontal trench until level of ground wire is reached.
- Place ground wire. Pour in additional PowerSet™ until ground wire is covered to desired height.
- Cover with fill. No tamping is necessary.
- Remove excess water prior to application.

Grid Construction:

- Pour PowerSet™ and spread over ground until desired thickness is achieved.
- Cover with fill.
- Use ground staples to maintain ground wire in center of fill.

The use of PowerSet™ around the grounding system will reduce surge impedance by increasing the effective contact area of the electrode to the soil.



Steady State Leakage Resistance
Using 4/0 Copper Wire vs. PowerSet**

LENGTH	.475" DIAMETER WIRE ONLY	PERCENTAGE OF RESISTANCE WITH .475" WIRE PLUS POWERSET IN VARIOUS DIAMETERS COMPARED TO WIRE ONLY (100%)			
		2"	3"	4"	6"
25'	100%	83%	78%	74%	69%
50'	100%	85%	81%	77%	73%
75'	100%	86%	82%	79%	75%
100'	100%	87%	83%	80%	77%
150'	100%	88%	84%	82%	78%
200'	100%	88%	85%	83%	79%
250'	100%	89%	85%	83%	80%
300'	100%	89%	86%	84%	80%

Shipping:

Loresco PowerSet™ is shipped in fifty (50) pound (22.7 kg) coated, woven polypropylene bags. Pallets are available with fifty bags per pallet. Proven export packaging is available.