



MachineFlex™ Power Cable for Wastewater Treatment Plants

When Reliability Is Key...

Downtime due to an electrical failure is not an option for your wastewater treatment facility. You need a wire and cable solution from a manufacturer you can rely on - Southwire Company, LLC can help! We understand that wastewater treatment facilities present a unique environment for electrical systems. When conditions like moisture, gases, and mechanical stresses are present, you need a cable that is designed for rugged industrial environments. Our MachineFlex™ Power Cable is made for conditions like these.

Features

- Stranded tinned copper conductors for corrosion resistance
- For use in applications where THHN and XHHW are accepted
- For continuous operation not in excess of 90° C for normal operation in wet and dry locations, 130° C for emergency overload, and 105° C for short circuit conditions.
- XLPE insulation provides excellent dielectric properties
- Rated for high-heat and is flame, moisture, gasoline, oil, and sunlight resistant
- For use in cable trays (1/0 and larger)
- Multiple approvals including UL-listed, CSA RW90, and NOM-ANCE LS

Benefits

- Flexible, yet maintains its form for easier and safer installation around bends
- Easier termination in tight areas
- Natural lubricity for easier and safer pulling installations versus rubber insulations
- Easier installations reduce stress on installer allowing for safer and more productive installations

Construction:

1. Conductor: 8 AWG - 4/0 AWG: Class K, Flexible Stranded, Soft-drawn Tinned Copper. 250 KCMIL - 750 KCMIL; Class I, Flexible Concentric Ropelay Stranded, Soft-drawn Tinned Copper
2. Insulation: Black, Sunlight, Gas & Oil Resistant Cross-Linked Polyethylene (XLPE)



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Table 1 – Weights and Measurements

Stock Number	Cond. Size	Cond. Number	Diameter Over Conductor	Insul. Thickness	Approx. OD	Approx. Weight	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance	Min Bending Radius	Allowable Ampacity In Raceway At 75°C†	Allowable Ampacity In Raceway At 90°C†
	AWG/ Kcmil	No.	inch	mil	inch	lb/1000ft	Ω/1000ft	Ω/1000ft	MΩ/ 1000ft	inch	Amp	Amp
TBA	8	1	0.158	45	0.248	69	0.688	0.861	0.03	1	50	55
TBA	6	1	0.19	45	0.28	100	0.433	0.542	0.028	1.12	65	75
TBA	4	1	0.235	45	0.325	156	0.272	0.341	0.029	1.3	85	95
TBA	2	1	0.3	45	0.39	239	0.173	0.217	0.028	1.56	115	130
TBA	1	1	0.34	55	0.45	307	0.137	0.171	0.028	1.8	130	145
TBA	1/0	1	0.4	55	0.51	380	0.109	0.137	0.028	2.04	150	170
TBA	2/0	1	0.43	55	0.54	468	0.087	0.11	0.027	2.16	175	195
TBA	3/0	1	0.49	55	0.6	591	0.069	0.087	0.027	2.4	200	225
672963	4/0	1	0.55	55	0.66	711	0.055	0.069	0.026	2.64	230	260
672912	250	1	0.605	65	0.735	846	0.046	0.059	0.027	2.94	255	290
672911◊	350	1	0.67	65	0.8	1136	0.032	0.041	0.026	3.2	310	350
672906◊	500	1	0.858	65	0.988	1631	0.022	0.028	0.026	3.95	380	430
672042◊	600	1	0.963	80	1.123	2015	0.017	0.022	0.025	5.62	420	475
672043◊	750	1	1.094	80	1.254	2577	0.015	0.021	0.026	6.27	475	535

All dimensions are nominal and subject to normal manufacturing tolerances

◊ SKU Cable marked with this symbol is a standard stock item

† Ampacities are based on Table 310.15 (B)(16) of the NEC, 2014 Edition. Allowable Ampacities of Insulated Conductors Rated Up To and Including 2000 Volts, 60°C Through 90°C (140°F Through 194°F) Not More Than Three Current-Carrying Conductors in Raceway, Cable, or Earth (Directly Buried), Based on ambient temperature of 30°C (86°F)

† † Ampacities are based on Table 310.15 (B)(17) of the NEC, 2014 Edition. Allowable Ampacities of Single-Insulated Conductors Rated Up to and Including 2000 Volts in Free Air, Based on Ambient Temperature of 30°C (86°F)