



# IRRIGATION CABLE



1-800-945-5542 • [WWW.PRIORITYWIRE.COM](http://WWW.PRIORITYWIRE.COM)

# Quadruplex Aluminum Conductor 600V URD



## APPLICATION:

Quadruplex Aluminum 600V URD cable is designed for use in secondary distribution circuits, where installed in duct or direct burial applications. Maximum operating temperature is not to exceed 90°C in wet and dry locations. Voltage rating is 600 volts. As an option, this cable can be provided pre-pulled into duct (CIC), ruggedized, and with ridged phase ID.

## CONDUCTORS:

- Concentric stranded or compressed 1350-H19 series aluminum conductor

## INSULATION:

- Phase Conductors - Black sunlight resistant cross-linked polyethylene (XLP) insulation
- Neutral Conductors – Black XLP with 3 extruded yellow stripes

## ASSEMBLY:

- Three phase conductors and the neutral are cabled together, with surface printing for identification. The neutral conductor has a yellow stripe and sequential footage markings.

## STANDARDS:

- ASTM B-230 Aluminum 1350-H19 Wire for Electrical Purposes
- ASTM B-231 Concentric-Lay-Stranded Aluminum 1350 Conductors
- ASTM B-609 Aluminum 1350 Round Wire, Annealed and Intermediate Tempers, for Electrical Purposes
- ASTM B-901 Compressed Round Stranded Aluminum Conductors Using Single Input Wire Construction
- ICEA S-105-692 600 Volt Single Layer Thermoset Insulated Utility Underground Distribution Cables
- Federal Specification A-A-59544A
- UL 854 Service-Entrance Cables, Sunlight Resistant
- RUS Accepted

Code Word	Phase Conductors			Neutral			Diameter		Weight	Ampacity**	
	Size	No. of Strands	Insulation Thickness	Size	No. of Strands	Insulation Thickness	Single Phase Conductor	Complete Cable		Direct Burial	In Duct
	AWG			AWG			inches	inches	inches	inches	lbs/kft
Tulsa	4*	7	0.060	4	7	0.060	0.35	0.83	269	120	85
Dyke	2	7	0.060	4	7	0.060	0.40	0.97	359	155	115
Wittenberg	2	7	0.060	2	7	0.060	0.40	0.97	389	155	115
Notre Dame	1/0	19	0.080	2	7	0.060	0.51	1.24	560	200	150
Purdue	1/0	19	0.080	1/0	19	0.080	0.51	1.24	617	200	150
Syracuse	2/0	19	0.080	1	19	0.080	0.56	1.34	687	225	170
Lafayette	2/0	19	0.080	2/0	19	0.080	0.56	1.34	745	225	170
Swarthmore	3/0	19	0.080	1/0	19	0.080	0.60	1.46	832	250	195
Davidson	3/0	19	0.080	3/0	19	0.080	0.60	1.46	903	250	195
Wake Forest	4/0	19	0.080	2/0	19	0.080	0.66	1.59	1,012	290	225
Earlham	4/0	19	0.080	4/0	19	0.080	0.66	1.59	1,101	290	225
Rust	250	37	0.095	3/0	19	0.080	0.75	1.81	1,215	320	250
Slippery Rock	350	37	0.095	4/0	19	0.080	0.85	2.05	1,598	385	305
Niagara	350	37	0.095	350	37	0.095	0.85	2.08	1,695	385	305
Wofford	500	37	0.095	350	37	0.095	0.98	2.35	2,174	465	370
Windham	750	61	0.110	500	37	0.095	1.19	2.78	3,305	580	460

All values are nominal and subject to correction.

\*Not RUS accepted size

\*\*Ampacity: 90°C conductor temperature, 20°C ambient temperature, RHO 90, 100% load factor for three current carrying conductors with neutral carrying only unbalanced load.

For NEC installations reference NEC article 310.15.



1-800-945-5542  
www.PriorityWire.com



# SABERTOUGH™

## Underground Irrigation Cable

The irrigation industry has encountered extensive issues when using standard underground distribution (UD) cables, due to rodents and other wear and tear that caused significant down time for the irrigation systems. Cable-in-Conduit (CIC) improved the protection of the cable, and prevented rodent issues, but is not user-friendly and added great difficulty to the installation process and severely limited cable installation lengths.

When presented with the opportunity to provide an improved irrigation cable that could withstand rodents attacks, offer an extended life-span and longer installation lengths, we developed our patent pending SABERTOUGH™ underground irrigation cable.

Priority Wire's SABERTOUGH™ underground distribution cable has enhanced the performance in the areas of installation ease and rodent protections. The installation is perfected by a smaller cable, advanced bend radius, longer master lengths, improved rodent resistance and ampacity over the CIC typically used for irrigation applications.

Crush resistance is a critical indicator of a cable's resistance against rodents' attacks for underground installations. The test is to measure crush resistance of the steel armor tape for SABERTOUGH™ and the crush resistance of rigid PVC conduit used for CIC.

	SABERTOUGH™	Cable in Conduit (CIC)
	<b>Crush Test</b>	
Material	7.9 mils Galvanized steel armor tape	1/2" PVC Conduit
Crush Breaking Point	10,225 lbs	947 lbs

The results show that a single layer galvanized steel armor tape has over 10 times the crush breaking strength of PVC conduit. SABERTOUGH™ has TWO layers of galvanized steel tape armor in open lapping structure.

Impact resistance is the other critical indicator of an underground cable's mechanical strength against rodents' attacks. This test is to measure the resistance to cone-shape impact that simulates rodent teeth on the double open lapping galvanized steel tape armor of SABERTOUGH™ cable. SABERTOUGH™ should be capable of withstanding the impacts without electrical contact between circuit conductors, and without electrical contact between a circuit conductor and the steel strip armor. The insulation of USE-2 is tested for comparisons.

	Hammer Weight	Hammer Falling height	Diameter of Hammer Tip	Impact Stress	No. of impacts until failure
	lbs	ft	inches	psi	
	<b>Impact Test</b>				
SABERTOUGH™ Armored USE-2 2x4/0AWG+2/0AWG	5.25	1.64	0.079	2387	20 times (without electrical connection)
Standard UD Cable USE-2 4/0AWG					2 times (electrical failure)

SABERTOUGH™ armor showed superior impact resistance comparing with cable USE-2, which is traditionally used for underground irrigation installations.

# SABERTOUGH™

## Underground Irrigation Cable

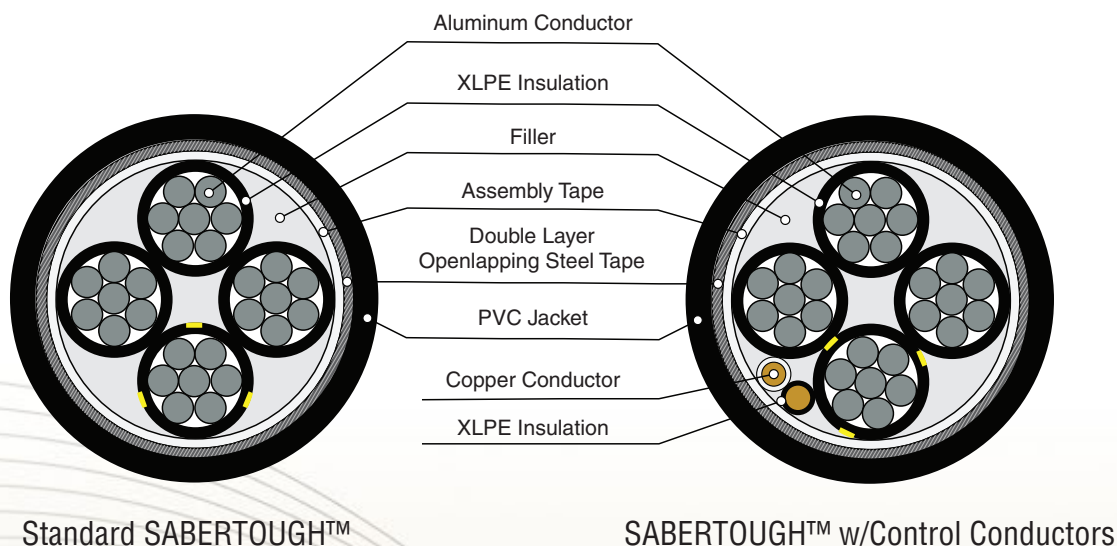
	SABERTOUGH™		Cable in Conduit CIC		SABERTOUGH™ vs. CIC
Ampacity	272	amps	236	amps	15%
Bending Radius	22	inch	26	inch	-14%
Reel Lengths	3,373	ft	1,773	ft	90%
Outer Diameter	1.8	inch	2.6	inch	-30%
Weight	1,809	lbs/kft	2,193	lbs/kft	-18%

\*Average based on 11 different size comparisons ranging in size from 6 AWG to 750 KCM

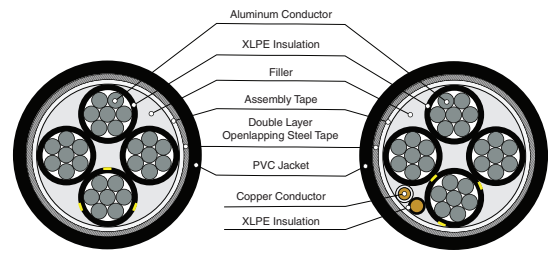
As the comparison above shows, the innovative design of SABERTOUGH™ offers a higher ampacity, lower bending radius, longer reel length, smaller cable diameter, and significant weight savings in a buried cable comparison to Cable-in-Conduit.

Unlike CIC, which is limited to the length of the conduit, SABERTOUGH™ can be produced on long master reels, and either shipped to the customer as master reels or cut to specific lengths.

SABERTOUGH™ is made to order.



# SaberTough™ Specialty UD Cable 600V



Standard SABERTOUGH™

SABERTOUGH™ w/Control Conductors

## APPLICATION:

Priority Wire's SaberTough™ is suitable for use in secondary distribution circuits, where installed in direct burial applications. Maximum operating temperature is not to exceed 90°C in wet and dry locations.

## CONDUCTORS:

- Three or four compact stranded 1350-H19 series aluminum

## INSULATION:

- Color coded Cross-Linked Polyethylene (XLPE)
- Conductors: black insulation, phase identification
- Neutral: black insulation with yellow stripe
- Optional control conductors per ICEA Method 1 E1

## NEUTRAL:

- XLPE insulated 1350-H19 aluminum conductor

## OPTIONAL CONTROL CONDUCTORS:

- Twisted pair of insulated solid or stranded copper conductors with Cross-Linked Polyethylene (XLPE)

## ASSEMBLY:

- Insulated power, neutral and optional control conductors twisted with non-hygroscopic fillers to make the cable round, and wrapped with assembling tape

## ARMOR:

- Double openlapping galvanized steel tape armor applied over the cable assembly

## JACKET:

- Black -25°C, flame retardant, polyvinyl chloride (PVC) jacket

## STANDARDS:

- UL 854
- ICEA S-105-692
- ASTM B3, B8, B258, B230, B400

**Cable is Made to Order**

### Without Control Conductors

Part Number	Conductor Size	No. of Conductors	Ground Size	Insulation Thickness	Inner PVC Jacket Thickness	Nom. Diameter Over Armor w/ Insulated Ground	Outer PVC Jacket Thickness	Nom. Diameter Over Jacket w/ Insulated Ground	Weight	Ampacity
	AWG/kcmil		AWG/kcmil	mils	mils	inches	mils	inches	lbs/kft	90°C
P11501	4	3	4	60	50	1.003	50	1.108	592	75
P11502	2	3	4	60	50	1.112	50	1.217	719	100
P11503	1/0	3	4	80	50	1.338	50	1.443	894	135
P11504	2/0	3	2	80	50	1.453	50	1.558	1049	150
P11505	4/0	3	2	80	60	1.703	60	1.829	1398	205
P11506	350	3	2/0	95	60	2.113	60	2.238	2156	280
P11507	500	3	2/0	95	60	2.435	60	2.592	2707	350

### With Control Conductors

Part Number	Conductor Size	No. of Cond.	Ground Size	Control Conductor	Phase Nom. XLPE Insulation Thickness	Control Nom. PVC Insulation Thickness	Inner PVC Jacket Thickness	Nom. Diameter Over Armor	Outer PVC Jacket Thickness	Nom. Diameter Over Jacket	Weight	Ampacity
	AWG/kcmil		AWG	No.*Size (sol)	mils	mils	mils	inches	mils	inches	lbs/kft	90°C
P11508	4	3	4	2*12awg	60	45	50	1.015	50	1.115	610	75
P11509	2	3	4	2*12awg	60	45	50	1.161	50	1.261	736	100
P11510	1/0	3	4	2*12awg	80	45	50	1.455	50	1.555	994	135
P11511	2/0	3	2	2*12awg	80	45	50	1.566	50	1.666	1144	150

All values are nominal and subject to correction.



1-800-945-5542  
www.PriorityWire.com





**PRIORITY**  
WIRE & CABLE, INC.

When **TIME** and **EFFICIENCY**  
are just as important as **PRICE** and **QUALITY** . . .

We make your business our **PRIORITY**

**Millions of Square Feet of Warehouse**



**Multi-Millions of Dollars in Inventory**

Your Inside Contact is: \_\_\_\_\_  
 \_\_\_\_\_ @prioritywire.com

US: 1-800-945-5542 • CANADA: 1-877-611-5122

**WWW.PRIORITYWIRE.COM**