

QI[®] THHN/THWN-2 Aluminum AA-8000

PVC Insulation with Nylon Jacket, 600 V

CME[®]
wire and cable

A Viakable Company

Features

QI[®] THHN/THWN-2 Marking apply only to sizes 6 AWG up to 1000 kcmil.

Use of lubrication is not mandatory to install QI[®] THHN/THWN-2 conductors in the raceways or cable trays.

PVC insulation offers exceptional electrical, physical and flame-retardant properties.

All sizes are also UL Listed as GRII and meet VW-1 Vertical Flame Test.

All colors are rated For CT Use in sizes 1/0 AWG and larger.

All sizes rated SR for Sunlight Exposure in all colors.

RoHS compliance.

All sizes meet VW-1 Vertical Flame Test.

Big sequential footage marking for easy identification.

Colored insulation and Nylon jacket is color coded (sizes 6 AWG and larger) for visual identification of conductors in electrical installations.

Application

CME Wire and Cable QI[®] THHN/THWN-2 conductors in all colors are suitable for use in general purpose wiring in accordance with the requirements of NFPA 70 (NEC[®]). Type THHN/THWN-2 conductors are approved for use at a maximum voltage of 600 volts and a maximum conductor temperature of 90 °C in wet or dry locations and 75 °C when exposed to gasoline and oil.

Specifications

UL Standard 83 (THHN/THWN-2)
ICEA S-95-658/NEMA WC70.
Federal Specification A-A-59544.
ANSI/NFPA 70 National Electric Code (NEC[®]).

Engineering Information

1. Conductors: Aluminum AA-8000 alloy compacted conductor, Class B stranding, per ASTM B801.

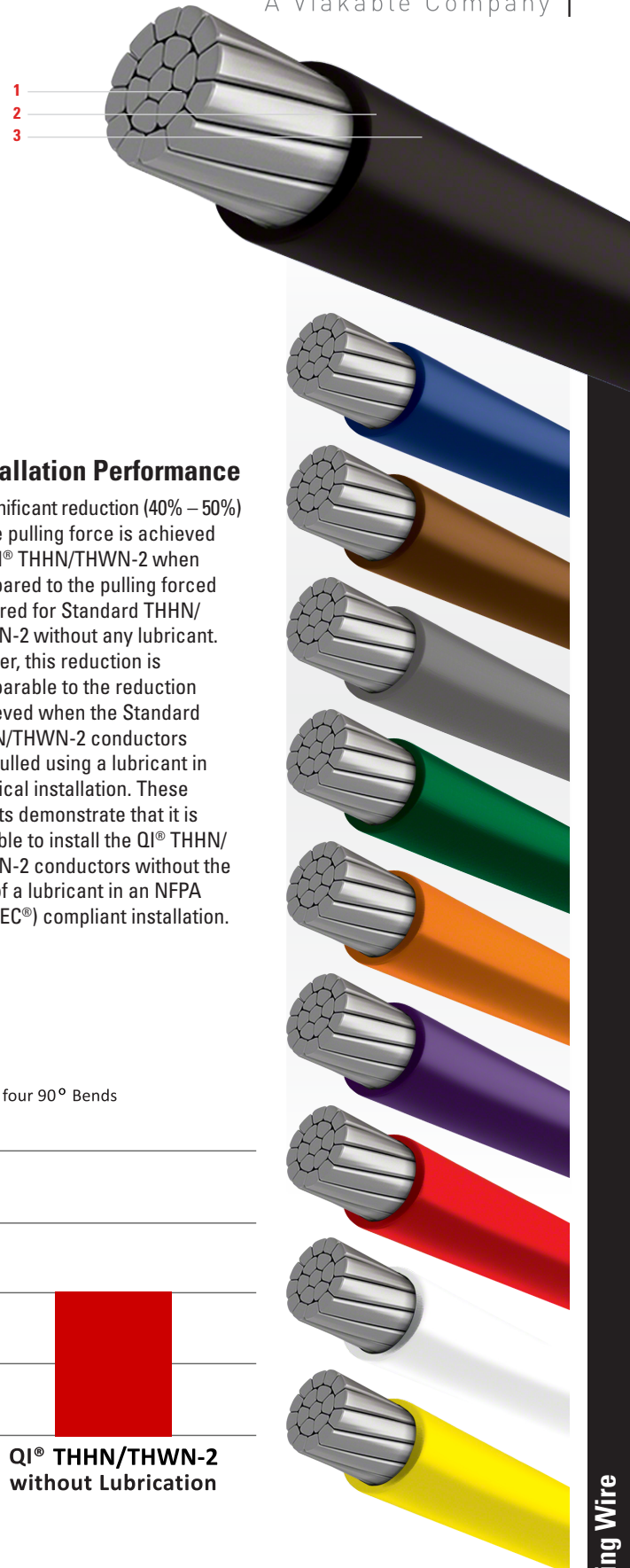
Sizes: 6 AWG - 1000 kcmil.

2. Insulation: Polyvinyl Chloride (PVC) per UL 83.

3. Jacket (color coded): Low friction tough polyamide, Nylon, per UL 83.

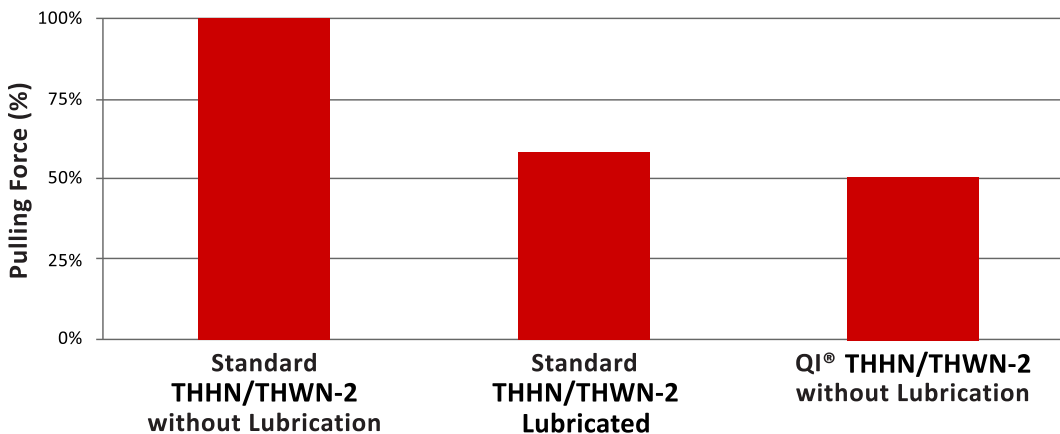
Installation Performance

A significant reduction (40% – 50%) in the pulling force is achieved for QI[®] THHN/THWN-2 when compared to the pulling force required for Standard THHN/THWN-2 without any lubricant. Further, this reduction is comparable to the reduction achieved when the Standard THHN/THWN-2 conductors are pulled using a lubricant in identical installation. These results demonstrate that it is feasible to install the QI[®] THHN/THWN-2 conductors without the use of a lubricant in an NFPA 70 (NEC[®]) compliant installation.



Pulling Force for QI[®] THHN/THWN-2

500-500-500-1/0 THHN/THWN-2 conductors in 3" EMT Conduits with four 90° Bends



Technical Data

QI® THHN/THWN-2 600 V, Aluminum AA-8000 Conductors

Size AWG or kcmil	Part Number*	Number of Wires	Nominal Thickness		Nominal Diameter in	Conductor Area in ²	Ampacity†			Nominal Mass lb/kft	Standard Packaging reels [#]	
			PVC (in)	Nylon (in)			60 °C	75 °C	90 °C			
6	13.30	6070**#	7	0.030	0.005	0.239	0.0449	40	50	60	40	500', 1000', 2500', 5000', or CUT
4	21.20	6080**#	7	0.040	0.006	0.305	0.0731	55	65	75	64	500', 1000', 2500', 5000', or CUT
3	26.70	6090**#	7	0.040	0.006	0.330	0.0855	65	75	85	77	500', 1000', 2500', 5000', or CUT
2	33.60	6100**#	7	0.040	0.006	0.360	0.1018	75	90	100	93	500', 1000', 2500', 5000', or CUT
1	42.40	6105**#	19	0.050	0.007	0.413	0.1340	85	100	115	119	500', 1000', 2500', 5000', or CUT
1/0	53.50	6110**#	19	0.050	0.007	0.450	0.1590	100	120	135	144	500', 1000', 2500', 5000', or CUT
2/0	67.40	6120**#	19	0.050	0.007	0.490	0.1886	115	135	150	175	500', 1000', 2500', 5000', or CUT
3/0	85.00	6130**#	19	0.050	0.007	0.537	0.2265	130	155	175	214	500', 1000', 2500', 5000', or CUT
4/0	107.00	6140**#	19	0.050	0.007	0.589	0.2725	150	180	205	261	500', 1000', 2500', 5000', or CUT
250	127.00	6250**#	37	0.060	0.008	0.656	0.3380	170	205	230	316	500', 1000', 2500', 5000', or CUT
300	152.00	6300**#	37	0.060	0.008	0.706	0.3915	190	230	255	370	500', 1000', 2500', 5000', or CUT
350	177.00	6350**#	37	0.060	0.008	0.752	0.4442	210	250	280	424	500', 1000', 2500', 5000', or CUT
400	203.00	6400**#	37	0.060	0.008	0.795	0.4964	225	270	305	477	500', 1000', 2500', 5000', or CUT
500	253.00	6500**#	37	0.060	0.008	0.872	0.5972	260	310	350	583	500' 1000', 2500' or CUT
600	304.00	6600**#	61	0.070	0.009	0.971	0.7405	285	340	385	708	500' 1000', 2500' or CUT
750	380.00	6750**#	61	0.070	0.009	1.066	0.8925	320	385	435	868	500' 1000', 2500' or CUT
Non-stock Items - Made-to-Order (subject to minimum runs and lead time.)												
900	456.00	6900**#	61	0.070	0.009	1.157	1.0514	355	425	480	1024	Made-to-order item ‡
1000	507.00	61000**#	61	0.070	0.009	1.218	1.1652	375	445	500	1128	Made-to-order item ‡

The above data are approximate and subject to normal manufacturing tolerances. Where required, the compatibility with glands, connectors and accessories should be verified using actual dimensions of the product.

NOTE: Number of wires may vary as permitted by the applicable standard.

† Ampacity values shown above are per the National Electrical Code Table 310.15(B)(16) (formerly Table 310.16).

‡ For Made-to-order items: Minimum Runs, Pricing & Lead Times are subject to the plant's production schedule.

* Part Number: ** Color identification, # Packaging Size. Example: 6070BE2500 = 6 AWG, Blue, 2500' reels.

CME Color Coding

**	BK	BE	BN	GN	GY	OE	PE	RD	WE	YW
Color	Black	Blue	Brown	Green	Grey	Orange	Purple	Red	White	Yellow

PRINT LEGENDS QI Sizes:

STRANDED CONDUCTOR SIZES 6 – 1 AWG (IN ALL COLORS):

CME WIRE & CABLE QI® E206516 C (UL) THHN OR THWN-2 GR II SIZE AWG (SIZE mm²) Compact AA-8000 600 V VW-1 SR ROHS.

CONDUCTOR SIZES 1/0 AWG – 1000 kcmil (IN ALL COLORS):

CME WIRE & CABLE QI® E206516 C (UL) THHN OR THWN-2 GR II SIZE AWG (SIZE mm²) Compact AA-8000 600 V VW-1 SR FT4 FOR CT USE ROHS.