



Arctic Ultraflex Blue®

Premium Arctic Grade Wire

Arctic Ultraflex Blue® continues to be the premier **arctic grade** wire rated and proven to work in extreme temperature ranges of -55°C to 105°C. This highly flexible wire combines finely stranded copper construction with a jacket material that resists the abuses of oil, gasoline, sunlight, saltwater, acids, and chemicals.

Arctic Ultraflex Blue® has high abrasion resistance and can be used in most 600 VOLT applications. UL Listed as AWM (Appliance Wiring Material).

Arctic Ultraflex Blue® is available in a multitude of primary colors, gauges, and configurations.

Arctic Ultraflex Blue® has numerous applications, including those approved under NEC article 400 and associated articles.

Applications

- UL 508A Industrial control panels
- Internal appliance and equipment wiring
- Inverter cables and wiring
- Industrial machines and robotics
- Construction equipment
- Marine, RV and automotive wiring
- Medium and heavy-duty trucks and trailers
- Load banks, motor leads, welding cable
- Forklifts and golf carts
- Batteries and chargers
- Power hookup cable

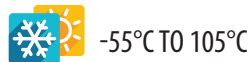


Insulation Properties

Properties	Test Method	Performance
Specific Gravity (±.02)	ASTM D-792	1.30
Durometer Shore "A" (±.02) INST./15 seconds	ASTM D-2240	77/65
Tensile Strength (60 mil)	ASTM D-412	2000
Elongation (%)	ASTM D-412	300
Brittle Point (C)	ASTM D-746	-55°C
Oxygen Index %	ASTM D-2863	25.0
Oil Aged 18 Hours @ 121°C		
% Retention of Tensiles	UL Standard	129%
% Retention of Elongation	UL Standard	72%
Air Aged 7 Days @ 136°C		
% Retention of Tensiles	ASTM D412-80	109%
% Retention of Elongation	ASTM D412-80	100%
Oil Aged 7 Days @ 60°C		
% Retention of Tensiles	ASTM D412-80	124%
% Retention of Elongation	ASTM D412-80	89%
VW-1 Flame Test	UL Standard	Pass
Product Cold Bend Test	UL Standard	Pass
Voltage Rating	UL Standard	600

Typical Legend

E196955 AWM 500MCM AWG OIL RESISTANT 600V VW-1 ... ARCTIC ULTRAFLEX BLUE® -55°C TO 105°C ... CSA 231208 TEW 105°C 600V FT1



Polar Wire Products
is the exclusive manufacturer of
Arctic Ultraflex Blue®
Premium Arctic Grade Wire





Class K Copper Stranded Construction Specifications

Size	Class K Copper Stranding	Strand Style	Conductor Outside Diameter	Insulation Thickness	Finished Outside Diameter	Ampacity* 30°C (86°F)	Ampacity* 40°C (104°F)
18 AWG	(16/30)	Tinned Copper	.045"	.030"	.105"	n/a	n/a
16 AWG	(26/30)	Tinned Copper	.057"	.030"	.118"	26	24
14 AWG	(41/30)	Tinned Copper	.070"	.030"	.130"	38	36
12 AWG	(65/30)	Tinned Copper	.090"	.030"	.150"	44	41
10 AWG	(105/30)	Tinned Copper	.120"	.030"	.180"	60	56
8 AWG	(168/30)	Bare Copper	.150"	.045"	.240"	85	81
6 AWG	(266/30)	Bare Copper	.190"	.060"	.310"	115	106
4 AWG	(420/30)	Bare Copper	.240"	.060"	.360"	150	142
2 AWG	(665/30)	Bare Copper	.310"	.060"	.430"	205	193
1 AWG	(836/30)	Bare Copper	.335"	.080"	.495"	240	223
1/0 AWG	(1064/30)	Bare Copper	.390"	.080"	.550"	285	264
2/0 AWG	(1330/30)	Bare Copper	.435"	.080"	.600"	325	304
3/0 AWG	(1672/30)	Bare Copper	.490"	.080"	.650"	380	355
4/0 AWG	(2109/30)	Bare Copper	.530"	.085"	.710"	440	411
250 MCM	(2527/30)	Bare Copper	.685"	.095"	.875"	495	461
350 MCM	(3458/30)	Bare Copper	.820"	.095"	1.010"	620	512
500 MCM	(5054/30)	Bare Copper	.995"	.110"	1.220"	760	710

*Ampacities of 600V and 1000V 105°C AWM wires in air

Note: Ampacities based on single conductor in free air, 30°C (86°F) or 40°C (104°F) ambient temperature as specified, 105°C (221°F) conductor temperature, per table 310-17 of the NEC (adjusted for 105°C). Free air ratings assume a one-cable diameter spacing between adjacent conductors.



Arctic UltraFlex Blue™
Single Conductor 18–10 AWG Wire
is spooled in 100' and 500' lengths,
and packaged in lengths to 35'

Bulk quantities
available on
request



Arctic Ultraflex Blue® Single Conductor Wire 10 – 18 AWG

ARCTIC ULTRAFLEX BLUE™ Wire Colors and Package Size

AWG	Stocked Wire Color	Part Number Bulk Spool	Part Number 500' Spool	Part Number 100' Spool	Part Number Clam-Shell Pkg	Clam-Shell Footage
18 AWG	● Black	AUF-18BLK	AUF-18BLK-500	AUF-18BLK-100	BP-18BLK	35'
18 AWG	● Blue	AUF-18BLU	AUF-18BLU-500	AUF-18BLU-100	BP-18BLU	35'
18 AWG	● Brown	AUF-18BRN	AUF-18BRN-500	AUF-18BRN-100	BP-18BRN	35'
18 AWG	● Green	AUF-18GRN	AUF-18GRN-500	AUF-18GRN-100	BP-18GRN	35'
18 AWG	● Gray	AUF-18GRY	AUF-18GRY-500	AUF-18GRY-100	BP-18GRY	35'
18 AWG	● Orange	AUF-18ORG	AUF-18ORG-500	AUF-18ORG-100	BP-18ORG	35'
18 AWG	● Red	AUF-18RED	AUF-18RED-500	AUF-18RED-100	BP-18RED	35'
18 AWG	○ White	AUF-18WHT	AUF-18WHT-500	AUF-18WHT-100	BP-18WHT	35'
18 AWG	● Yellow	AUF-18YEL	AUF-18YEL-500	AUF-18YEL-100	BP-18YEL	35'
16 AWG	● Black	AUF-16BLK	AUF-16BLK-500	AUF-16BLK-100	BP-16BLK	30'
16 AWG	● Blue	AUF-16BLU	AUF-16BLU-500	AUF-16BLU-100	BP-16BLU	30'
16 AWG	● Brown	AUF-16BRN	AUF-16BRN-500	AUF-16BRN-100	BP-16BRN	30'
16 AWG	● Green	AUF-16GRN	AUF-16GRN-500	AUF-16GRN-100	BP-16GRN	30'
16 AWG	● Gray	AUF-16GRY	AUF-16GRY-500	AUF-16GRY-100	BP-16GRY	30'
16 AWG	● Orange	AUF-16ORG	AUF-16ORG-500	AUF-16ORG-100	BP-16ORG	30'
16 AWG	● Red	AUF-16RED	AUF-16RED-500	AUF-16RED-100	BP-16RED	30'
16 AWG	○ White	AUF-16WHT	AUF-16WHT-500	AUF-16WHT-100	BP-16WHT	30'
16 AWG	● Yellow	AUF-16YEL	AUF-16YEL-500	AUF-16YEL-100	BP-16YEL	30'
14 AWG	● Black	AUF-14BLK	AUF-14BLK-500	AUF-14BLK-100	BP-14BLK	20'
14 AWG	● Blue	AUF-14BLU	AUF-14BLU-500	AUF-14BLU-100	BP-14BLU	20'
14 AWG	● Brown	AUF-14BRN	AUF-14BRN-500	AUF-14BRN-100	BP-14BRN	20'
14 AWG	● Green	AUF-14GRN	AUF-14GRN-500	AUF-14GRN-100	BP-14GRN	20'
14 AWG	● Gray	AUF-14GRY	AUF-14GRY-500	AUF-14GRY-100	BP-14GRY	20'
14 AWG	● Orange	AUF-14ORG	AUF-14ORG-500	AUF-14ORG-100	BP-14ORG	20'
14 AWG	● Purple	AUF-14PUR	AUF-14PUR-500	AUF-14PUR-100	BP-14PUR	20'
14 AWG	● Red	AUF-14RED	AUF-14RED-500	AUF-14RED-100	BP-14RED	20'
14 AWG	○ White	AUF-14WHT	AUF-14WHT-500	AUF-14WHT-100	BP-14WHT	20'
14 AWG	● Yellow	AUF-14YEL	AUF-14YEL-500	AUF-14YEL-100	BP-14YEL	20'
12 AWG	● Black	AUF-12BLK	AUF-12BLK-500	AUF-12BLK-100	BP-12BLK	15'
12 AWG	● Blue	AUF-12BLU	AUF-12BLU-500	AUF-12BLU-100	BP-12BLU	15'
12 AWG	● Brown	AUF-12BRN	AUF-12BRN-500	AUF-12BRN-100	BP-12BRN	15'
12 AWG	● Green	AUF-12GRN	AUF-12GRN-500	AUF-12GRN-100	BP-12GRN	15'
12 AWG	● Gray	AUF-12GRY	AUF-12GRY-500	AUF-12GRY-100	BP-12GRY	15'
12 AWG	● Orange	AUF-12ORG	AUF-12ORG-500	AUF-12ORG-100	BP-12ORG	15'
12 AWG	● Purple	AUF-12PUR	AUF-12PUR-500	AUF-12PUR-100	BP-12PUR	15'
12 AWG	● Red	AUF-12RED	AUF-12RED-500	AUF-12RED-100	BP-12RED	15'
12 AWG	○ White	AUF-12WHT	AUF-12WHT-500	AUF-12WHT-100	BP-12WHT	15'
12 AWG	● Yellow	AUF-12YEL	AUF-12YEL-500	AUF-12YEL-100	BP-12YEL	15'
10 AWG	● Black	AUF-10BLK	AUF-10BLK-500	AUF-10BLK-100	BP-10BLK	10'
10 AWG	● Blue	AUF-10BLU	AUF-10BLU-500	AUF-10BLU-100	BP-10BLU	10'
10 AWG	● Brown	AUF-10BRN	AUF-10BRN-500	AUF-10BRN-100	BP-10BRN	10'
10 AWG	● Green	AUF-10GRN	AUF-10GRN-500	AUF-10GRN-100	BP-10GRN	10'
10 AWG	● Gray	AUF-10GRY	AUF-10GRY-500	AUF-10GRY-100	BP-10GRY	10'
10 AWG	● Orange	AUF-10ORG	AUF-10ORG-500	AUF-10ORG-100	BP-10ORG	10'
10 AWG	● Red	AUF-10RED	AUF-10RED-500	AUF-10RED-100	BP-10RED	10'
10 AWG	○ White	AUF-10WHT	AUF-10WHT-500	AUF-10WHT-100	BP-10WHT	10'
10 AWG	● Yellow	AUF-10YEL	AUF-10YEL-500	AUF-10YEL-100	BP-10YEL	10'



Arctic UltraFlex Blue™ Single Conductor 18–10 AWG Wire is spooled in 100' and 500' lengths, and packaged in 10'– 35' lengths. Bulk quantities available on request.



Arctic Ultraflex Blue® Single Conductor Wire 8 AWG – 500 MCM

E196955 9A AWM 8 AWG OIL RESISTANT 600V VW-1 ... ARCTIC ULTRAFLEX BLUE™ -55°C TO 105°C ... CSA 234608 TEW 105°C 600V FT1	
8 AWG	
E196955 9A AWM 8 AWG OIL RESISTANT 600V VW-1 ... ARCTIC ULTRAFLEX BLUE™ -55°C TO 105°C ... CSA 234608 TEW 105°C 600V FT1	
8 AWG	
E196955 9A AWM 6 AWG OIL RESISTANT 600V VW-1 ... ARCTIC ULTRAFLEX BLUE™ -55°C TO 105°C ... CSA 234608 TEW 105°C 600V FT1	
6 AWG	
E196955 9A AWM 6 AWG OIL RESISTANT 600V VW-1 ... ARCTIC ULTRAFLEX BLUE™ -55°C TO 105°C ... CSA 234608 TEW 105°C 600V FT1	
6 AWG	
E196955 9A AWM 4 AWG OIL RESISTANT 600V VW-1 ... ARCTIC ULTRAFLEX BLUE™ -55°C TO 105°C ... CSA 234608 TEW 105°C 600V FT1	
4 AWG	
E196955 9A AWM 4 AWG OIL RESISTANT 600V VW-1 ... ARCTIC ULTRAFLEX BLUE™ -55°C TO 105°C ... CSA 234608 TEW 105°C 600V FT1	
4 AWG	
E196955 9A AWM 2 AWG OIL RESISTANT 600V VW-1 ... ARCTIC ULTRAFLEX BLUE™ -55°C TO 105°C ... CSA 234608 TEW 105°C 600V FT1	
2 AWG	
E196955 9A AWM 1/0 AWG OIL RESISTANT 600V VW-1 ... ARCTIC ULTRAFLEX BLUE™ -55°C TO 105°C ... CSA 234608 TEW 105°C 600V FT1	
1/0 AWG	
E196955 9A AWM 2/0 AWG OIL RESISTANT 600V VW-1 ... ARCTIC ULTRAFLEX BLUE™ -55°C TO 105°C ... CSA 234608 TEW 105°C 600V FT1	
2/0 AWG	
E196955 9A AWM 4/0 AWG OIL RESISTANT 600V VW-1 ... ARCTIC ULTRAFLEX BLUE™ -55°C TO 105°C ... CSA 234608 TEW 105°C 600V FT1	
4/0 AWG	
E196955 9A AWM 250 MCM AWG OIL RESISTANT 600V VW-1 ... ARCTIC ULTRAFLEX BLUE™ -55°C TO 105°C ... CSA 234608 TEW 105°C 600V FT1	
250 MCM	
E196955 9A AWM 500 MCM AWG OIL RESISTANT 600V VW-1 ... ARCTIC ULTRAFLEX BLUE™ -55°C TO 105°C ... CSA 234608 TEW 105°C 600V FT1	
500 MCM	

Arctic UltraFlex Blue™ Single Conductor 8 AWG – 500 MCM Wire is spooled by the foot—coiled in increments of up to 100' and spooled in lengths over 100'. Bulk quantities available on request.



Arctic Ultraflex Blue®

8 AWG – 500 MCM Wire Colors, Stranding Comparison Chart

Arctic Ultraflex Blue® Wire Colors

8 AWG through 500 MCM is sold by the foot—coiled in lengths up to 100', and spooled in lengths over 100'.

Part Number	AWG	Stocked Wire Color
AUF-8BLK	8 AWG	● Black
AUF-8BLU	8 AWG	● Blue
AUF-8RED	8 AWG	● Red
AUF-8WHT	8 AWG	○ White
AUF-8GRN	8 AWG	● Green
AUF-6BLK	6 AWG	● Black
AUF-6BLU	6 AWG	● Blue
AUF-6RED	6 AWG	● Red
AUF-6WHT	6 AWG	○ White
AUF-6GRN	6 AWG	● Green
AUF-6GRN/ORG	6 AWG	● Green/Orange Stripe
AUF-6GRN/YEL	6 AWG	● Green/Yellow Stripe
AUF-4BLK	4 AWG	● Black
AUF-4BLU	4 AWG	● Blue
AUF-4RED	4 AWG	● Red
AUF-4WHT	4 AWG	○ White
AUF-4GRN	4 AWG	● Green
AUF-4GRN/YEL	4 AWG	● Green/Yellow Stripe
AUF-2BLK	2 AWG	● Black
AUF-2BLU	2 AWG	● Blue
AUF-2RED	2 AWG	● Red
AUF-2WHT	2 AWG	○ White
AUF-2GRN	2 AWG	● Green
AUF-2GRN/ORG	2 AWG	● Green/Orange Stripe
AUF-2GRN/YEL	2 AWG	● Green/Yellow Stripe
AUF-1/0BLK	1/0	● Black
AUF-1/0BLU	1/0	● Blue
AUF-1/0RED	1/0	● Red
AUF-2/0BLK	2/0	● Black
AUF-2/0BLU	2/0	● Blue
AUF-2/0RED	2/0	● Red
AUF-4/0BLK	4/0	● Black
AUF-4/0BLU	4/0	● Blue
AUF-4/0RED	4/0	● Red
AUF-250 MCM	250 MCM	● Blue
AUF-500 MCM	500 MCM	● Blue



-55°C TO 105°C



Custom colors and striping available upon request — minimums apply

WIRE STRANDING COMPARISON CHART

Polar Wire Standard

Class B		Class C		Class G		Class H		Class I		Class K		Class M		Locomotive Cable	
Stranding	OD	Stranding	OD	Stranding	OD	Stranding	OD	Stranding	OD	Stranding	OD	Stranding	OD	Stranding	OD
2/0 / 19	.4205	2/0 / 37	.3750	1/0 / 133	.4240	1/0 / 259	.4240	N/A	-	N/A	-	1/0 / 2646	.4310	1/0 / 275	.4200
3/0 / 19	.4700	3/0 / 37	.4700	2/0 / 133	.4740	2/0 / 259	.4770	1/0 / 266	.4320	1/0 / 1064	.4100	N/A	-	2/0 / 325	.4600
4/0 / 19	.5280	4/0 / 37	.5300	3/0 / 133	.5330	3/0 / 259	.5330	2/0 / 342	.4700	2/0 / 1323	.5200	2/0 / 3325	.4600	N/A	-
250 MCM / 37	.5720	250 MCM / 61	.5760	N/A	-	N/A	-	3/0 / 418	.5450	3/0 / 1666	.5420	3/0 / 4256	.5750	3/0 / 450	.5650
300 MCM / 37	.7400	300 MCM / 61	.6309	4/0 / 133	.5990	4/0 / 259	.5900	4/0 / 532	.5900	N/A	-	N/A	-	N/A	-
350 MCM / 37	.6850	350 MCM / 61	.6813	250 MCM / 259	.6500	250 MCM / 427	.6530	250 MCM / 637	.6800	4/0 / 2107	.6300	4/0 / 5320	.6450	262.6 MCM / 650	.6500
400 MCM / 37	.8250	400 MCM / 61	.7290	300 MCM / 259	.7140	300 MCM / 427	.7160	300 MCM / 735	.7218	250 MCM / 2499	.6820	250 MCM / 6384	.6480	313.1 MCM / 775	.7100
500 MCM / 37	.8100	500 MCM / 61	.8145	350 MCM / 259	.7730	350 MCM / 427	.7720	350 MCM / 882	.8830	300 MCM / 2989	.7700	300 MCM / 7581	.8108	N/A	-
N/A	-	N/A	-	400 MCM / 259	.8260	400 MCM / 427	.8260	400 MCM / 980	.8380	350 MCM / 3458	.8450	350 MCM / 8806	.8822	373.7 MCM / 925	1.140
600 MCM / 61	.8930	600 MCM / 91	.8932	N/A	-	N/A	-	N/A	-	N/A	-	N/A	-	444 MCM / 1100	1.230
700 MCM / 61	.9640	700 MCM / 91	.9647	500 MCM / 259	.9220	500 MCM / 427	.9230	500 MCM / 1225	.9400	450 MCM / 4522	1.008	450 MCM / 11396	.9400	535.3 MCM / 1325	1.320
750 MCM / 61	.9980	750 MCM / 91	.9988	550 MCM / 427	.9230	550 MCM / 703	-	550 MCM / 1372	.9910	500 MCM / 5054	1.022	500 MCM / 12691	.9970	N/A	-
N/A	-	N/A	-	600 MCM / 427	.9690	600 MCM / 703	1.022	600 MCM / 1470	1.101	550 MCM / 5453	1.099	550 MCM / 13664	1.198	646.4 MCM / 1600	1.450
1000 MCM / 61	1.160	1000 MCM / 91	1.208	750 MCM / 427	1.131	750 MCM / 703	1.320	650 MCM / 1596	1.089	600 MCM / 5985	1.160	600 MCM / 14945	1.280	N/A	-
N/A	-	N/A	-	N/A	-	N/A	-	750 MCM / 1862	1.297	N/A	-	750 MCM / 18788	1.487	777.7 MCM / 1925	1.540
N/A	-	N/A	-	N/A	-	N/A	-	N/A	-	N/A	-	N/A	-	1111.1 MCM / 2745	1.340