

# Arctic Ultraflex Blue®

## Premier Cold Weather Flexible Wire

**Outstanding Flexibility and Proven Performance in Extreme Cold to -55°C**

**Arctic Ultraflex Blue®** continues to be the premier **arctic grade** wire rated and proven to work in extreme temperatures of -55°C to 105°C.

This highly flexible wire combines finely stranded copper construction with a durable jacket material that resists oil and gasoline, sunlight, saltwater, acids, and chemicals.

**Arctic Ultraflex Blue®** is highly abrasion resistant and can be used in most 600V applications, including those approved under NEC article 400 and associated articles. UL Listed as AWM (Appliance Wiring Material).

### Applications

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

- 100% copper flexible, fine strand conductors — NO ALUMINUM
- 18 to 10 AWG tinned for corrosion resistance and conductivity and available spooled or packaged
- 8 AWG to 500 MCM sold in spools and by the foot



### Typical Legend

E196955 **AWM** 500MCM OIL RESISTANT 600V VW-1 ... ARCTIC ULTRAFLEX BLUE® -55°C TO 105°C ... CSA 234608 TEW 105°C 600V FT1

### 500 MCM Single Conductor Arctic Ultraflex Blue®

**5054/30 UL Class K strands per conductor**



-55°C TO 105°C



**Large spools and bulk quantities available**

**PROUDLY MADE IN THE USA**



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

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# Arctic Ultraflex Blue®

## Wire Construction Specifications and Properties



Polar Wire Products is the exclusive manufacturer  
of **Arctic Ultraflex Blue®**  
Premium Cold Weather Flexible Industrial Wire

### Typical Legend

E196955 AWM 500MCM OIL RESISTANT  
600V VW-1 ... ARCTIC ULTRAFLEX BLUE® -55°C  
TO 105°C ... CSA 234608 TEW 105°C 600V FT1



-55°C TO 105°C

### 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

### Class K Copper Stranded Construction Specifications

Size	Class K Copper Strand Qty/AWG	Class K Copper Strand Style	Nominal Conductor Outside Diameter	Insulation Thickness	Minimum Finished Outside Diameter	Ampacity* 30°C (86°F)	Ampacity* 40°C (104°F)
18 AWG	16/30	Tinned	.047"	.030"	.105"	n/a	n/a
16 AWG	26/30	Tinned	.059"	.030"	.118"	26	24
14 AWG	41/30	Tinned	.074"	.030"	.130"	38	36
12 AWG	65/30	Tinned	.093"	.030"	.150"	44	41
10 AWG	105/30	Tinned	.118"	.030"	.180"	60	56
8 AWG	168/30	Bare	.150"	.045"	.240"	85	81
6 AWG	266/30	Bare	.190"	.060"	.310"	115	106
4 AWG	420/30	Bare	.240"	.060"	.360"	150	142
2 AWG	665/30	Bare	.310"	.060"	.430"	205	193
1 AWG	836/30	Bare	.335"	.080"	.495"	240	223
1/0 AWG	1064/30	Bare	.390"	.080"	.550"	285	264
2/0 AWG	1330/30	Bare	.435"	.080"	.600"	325	304
3/0 AWG	1672/30	Bare	.490"	.080"	.650"	380	355
4/0 AWG	2109/30	Bare	.530"	.085"	.710"	440	411
250 MCM	2451/30	Bare	.685"	.095"	.875"	495	461
350 MCM	3458/30	Bare	.820"	.095"	1.010"	620	512
500 MCM	5054/30	Bare	.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.

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# Arctic Ultraflex Blue®

## 18 to 10 AWG Single Conductor Tinned Wire



### Arctic Ultraflex Blue® Finely Stranded Class K Tinned Copper Wire Jacket Colors

AWG	Stocked Wire Color	5000' Spool Part Number	2500' Spool Part Number	500' Spool Part Number	100' Spool Part Number	Clamshell Package Part Number	Length
18	● Black	AUF-18BLK	-	AUF-18BLK-500	AUF-18BLK-100	BP-18BLK	35'
18	● Blue	AUF-18BLU	-	AUF-18BLU-500	AUF-18BLU-100	BP-18BLU	35'
18	● Brown	AUF-18BRN	-	AUF-18BRN-500	AUF-18BRN-100	BP-18BRN	35'
18	● Green	AUF-18GRN	-	AUF-18GRN-500	AUF-18GRN-100	BP-18GRN	35'
18	● Gray	AUF-18GRY	-	AUF-18GRY-500	AUF-18GRY-100	BP-18GRY	35'
18	● Orange	AUF-18ORG	-	AUF-18ORG-500	AUF-18ORG-100	BP-18ORG	35'
18	● Red	AUF-18RED	-	AUF-18RED-500	AUF-18RED-100	BP-18RED	35'
18	○ White	AUF-18WHT	-	AUF-18WHT-500	AUF-18WHT-100	BP-18WHT	35'
18	● Yellow	AUF-18YEL	-	AUF-18YEL-500	AUF-18YEL-100	BP-18YEL	35'
16	● Black	AUF-16BLK	-	AUF-16BLK-500	AUF-16BLK-100	BP-16BLK	30'
16	● Blue	AUF-16BLU	-	AUF-16BLU-500	AUF-16BLU-100	BP-16BLU	30'
16	● Brown	AUF-16BRN	-	AUF-16BRN-500	AUF-16BRN-100	BP-16BRN	30'
16	● Green	AUF-16GRN	-	AUF-16GRN-500	AUF-16GRN-100	BP-16GRN	30'
16	● Gray	AUF-16GRY	-	AUF-16GRY-500	AUF-16GRY-100	BP-16GRY	30'
16	● Orange	AUF-16ORG	-	AUF-16ORG-500	AUF-16ORG-100	BP-16ORG	30'
16	● Red	AUF-16RED	-	AUF-16RED-500	AUF-16RED-100	BP-16RED	30'
16	○ White	AUF-16WHT	-	AUF-16WHT-500	AUF-16WHT-100	BP-16WHT	30'
16	● Yellow	AUF-16YEL	-	AUF-16YEL-500	AUF-16YEL-100	BP-16YEL	30'
14	● Black	AUF-14BLK	-	AUF-14BLK-500	AUF-14BLK-100	BP-14BLK	20'
14	● Blue	AUF-14BLU	-	AUF-14BLU-500	AUF-14BLU-100	BP-14BLU	20'
14	● Brown	AUF-14BRN	-	AUF-14BRN-500	AUF-14BRN-100	BP-14BRN	20'
14	● Green	AUF-14GRN	-	AUF-14GRN-500	AUF-14GRN-100	BP-14GRN	20'
14	● Gray	AUF-14GRY	-	AUF-14GRY-500	AUF-14GRY-100	BP-14GRY	20'
14	● Orange	AUF-14ORG	-	AUF-14ORG-500	AUF-14ORG-100	BP-14ORG	20'
14	● Purple	AUF-14PUR	-	AUF-14PUR-500	AUF-14PUR-100	BP-14PUR	20'
14	● Red	AUF-14RED	-	AUF-14RED-500	AUF-14RED-100	BP-14RED	20'
14	○ White	AUF-14WHT	-	AUF-14WHT-500	AUF-14WHT-100	BP-14WHT	20'
14	● Yellow	AUF-14YEL	-	AUF-14YEL-500	AUF-14YEL-100	BP-14YEL	20'
12	● Black	-	AUF-12BLK	AUF-12BLK-500	AUF-12BLK-100	BP-12BLK	15'
12	● Blue	-	AUF-12BLU	AUF-12BLU-500	AUF-12BLU-100	BP-12BLU	15'
12	● Brown	-	AUF-12BRN	AUF-12BRN-500	AUF-12BRN-100	BP-12BRN	15'
12	● Green	-	AUF-12GRN	AUF-12GRN-500	AUF-12GRN-100	BP-12GRN	15'
12	● Gray	-	AUF-12GRY	AUF-12GRY-500	AUF-12GRY-100	BP-12GRY	15'
12	● Orange	-	AUF-12ORG	AUF-12ORG-500	AUF-12ORG-100	BP-12ORG	15'
12	● Purple	-	AUF-12PUR	AUF-12PUR-500	AUF-12PUR-100	BP-12PUR	15'
12	● Red	-	AUF-12RED	AUF-12RED-500	AUF-12RED-100	BP-12RED	15'
12	○ White	-	AUF-12WHT	AUF-12WHT-500	AUF-12WHT-100	BP-12WHT	15'
12	● Yellow	-	AUF-12YEL	AUF-12YEL-500	AUF-12YEL-100	BP-12YEL	15'
10	● Black	-	AUF-10BLK	AUF-10BLK-500	AUF-10BLK-100	BP-10BLK	10'
10	● Blue	-	AUF-10BLU	AUF-10BLU-500	AUF-10BLU-100	BP-10BLU	10'
10	● Brown	-	AUF-10BRN	AUF-10BRN-500	AUF-10BRN-100	BP-10BRN	10'
10	● Green	-	AUF-10GRN	AUF-10GRN-500	AUF-10GRN-100	BP-10GRN	10'
10	● Gray	-	AUF-10GRY	AUF-10GRY-500	AUF-10GRY-100	BP-10GRY	10'
10	● Orange	-	AUF-10ORG	AUF-10ORG-500	AUF-10ORG-100	BP-10ORG	10'
10	● Red	-	AUF-10RED	AUF-10RED-500	AUF-10RED-100	BP-10RED	10'
10	○ White	-	AUF-10WHT	AUF-10WHT-500	AUF-10WHT-100	BP-10WHT	10'
10	● Yellow	-	AUF-10YEL	AUF-10YEL-500	AUF-10YEL-100	BP-10YEL	10'



Red and Black 14, 16, and 18 AWG are also stocked in 1000' spools, other colors on request

Bulk quantities available upon request

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## 8 AWG to 500 MCM Single Conductor Wire



### Arctic Ultraflex Blue® Finely Stranded Class K Bare Copper Wire Jacket 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	Size	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-8GRN/YEL	8 AWG	● Green/Yellow Stripe
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-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-1BLK	1 AWG	● Black
AUF-1RED	1 AWG	● Red
AUF-1/0BLK	1/0 AWG	● Black
AUF-1/0BLU	1/0 AWG	● Blue
AUF-1/0RED	1/0 AWG	● Red
AUF-2/0BLK	2/0 AWG	● Black
AUF-2/0BLU	2/0 AWG	● Blue
AUF-2/0RED	2/0 AWG	● Red
AUF-3/0BLK	3/0 AWG	● Black
AUF-3/0RED	3/0 AWG	● Red
AUF-4/0BLK	4/0 AWG	● Black
AUF-4/0BLU	4/0 AWG	● Blue
AUF-4/0RED	4/0 AWG	● Red
AUF-250MCM	250 MCM	● Blue
AUF-500MCM	500 MCM	● Black
AUF-500MCM	500 MCM	● Blue



-55°C TO 105°C

Custom colors and striping available on 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	.3900	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 / 1330	.4350	2/0 / 3325	.4600	N/A	-
250 MCM / 37	.5720	250 MCM / 61	.5760	N/A	-	N/A	-	3/0 / 418	.5450	3/0 / 1672	.4900	3/0 / 4256	.5750	3/0 / 450	.5650
350 MCM / 37	.6850	350 MCM / 61	.6813	250 MCM / 259	.6500	250 MCM / 427	.6530	250 MCM / 637	.6800	4/0 / 2109	.5300	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 / 2451	.6850	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	.8200	350 MCM / 8806	.8822	373.7 MCM / 925	1.140
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	-

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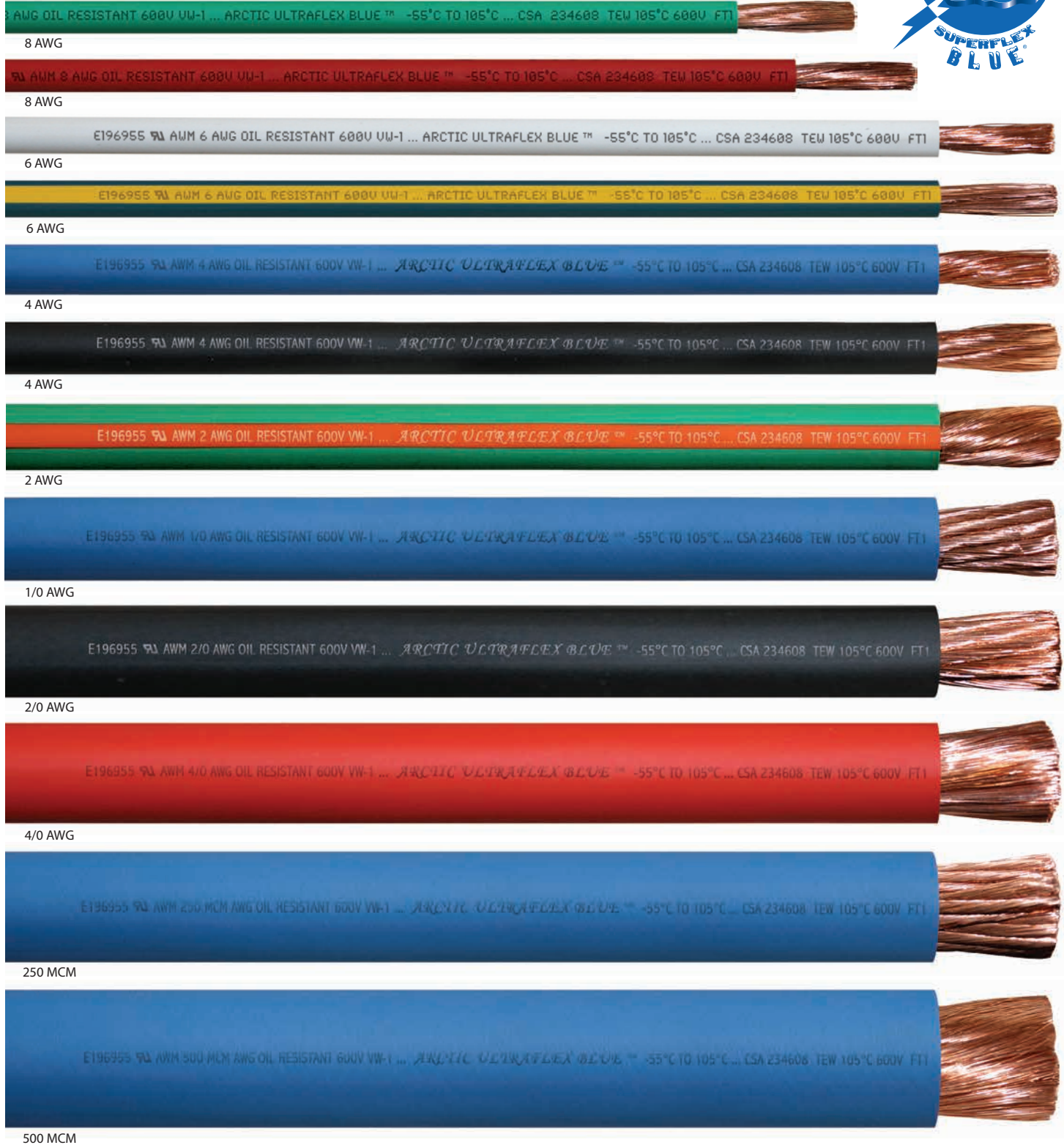
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