



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

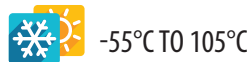


Insulation Properties

| 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 234608 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 | 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 Copper | .047" | .030" | .105" | n/a | n/a |
| 16 AWG | (26/30) | Tinned Copper | .059" | .030" | .118" | 26 | 24 |
| 14 AWG | (41/30) | Tinned Copper | .074" | .030" | .130" | 38 | 36 |
| 12 AWG | (65/30) | Tinned Copper | .093" | .030" | .150" | 44 | 41 |
| 10 AWG | (105/30) | Tinned Copper | .118" | .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 |