

# Alumaflex™

## Type MC AL Feeder THHN/THWN-2 Conductors



1/0 AWG through 900 kcmil Alumaflex™ THHN/THWN-2 Insulated Singles with 8000 series Triple E™ Aluminum Alloy. Bare Alumaflex™ Aluminum Alloy Grounding Conductor. UL Listed. 600 Volts. Lightweight Aluminum Interlocked Armor.

### APPLICATIONS

#### Suitable for use as follows:

- Feeder and service power distribution in commercial, industrial, institutional, and multi-residential buildings.
- Power, lighting circuits.
- Fished or embedded in plaster.
- Concealed or exposed installations.
- Environmental air-handling spaces per NEC 300.22 (C).
- Places of Assembly per NEC 518.4 and theaters per NEC 520.5.
- Installation in cable tray and approved raceways.
- Under raised floors for information technology equipment conductors and cables per NEC 645.5(D) & 645.5(D)(2).
- Class I Div. 2, Class II Div 2, & Class III Div. 1 Hazardous Locations.

### STANDARDS & REFERENCES

Southwire Alumaflex™ Type MC Cable with Triple E™ Aluminum Alloy meets or exceeds these requirements:

- UL 83
- UL 1569
- UL 1685
- Federal Specification A-A59544 (formerly J-C-30B)
- UL Online Product Guide Info - Metal-Clad Cable (PJAZ) ( [www.ul.com](http://www.ul.com) )
- IEEE 1202 (70,000 Btu/hr) Vertical Cable Tray Flame Test
- NFPA 70 (National Electrical Code), Article 330
- REACH/RoHS-2 (Chemical Limit) Compliant
- Listed for use in UL 1, 2, and 3 Hour Through-Penetration Firestop Systems

### CONSTRUCTION

Southwire Alumaflex™ Type MC Cable with Triple E™ Aluminum Alloy is constructed with Type THHN/THWN-2 conductors rated 90° C dry, and a bare equipment grounding conductor. Conductors are Alumaflex™ AA-8000 series aluminum alloy compact stranded. A binder tape is wrapped over the conductors. Aluminum interlocking armor is applied over the assembly. Conductors also available in High Voltage Colors.



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AlumaFlex™ Type MC AL THHN/THWN-2 Conductors

| CONDUCTOR SIZE AND COLORS               | GROUNDING SIZE AND COLOR | STOCK NUMBER | WEIGHT (LBS/1000') | OVERALL DIAMETER (INCHES) |
|---|--------------------------|--------------|--------------------|---------------------------|
| <b>CONDUCTOR COLORS 120/208V</b>        |                          |              |                    |                           |
| 1/0-3 AL THHN<br>(BLACK/RED/WHITE)      | 4 ALUMINUM<br>(BARE)     | 55-87-59-99  | 602                | 1.190                     |
| 1/0-4 AL THHN<br>(BLACK/RED/BLUE/WHITE) | 4 ALUMINUM<br>(BARE)     | 60-52-87-99  | 758                | 1.304                     |
| 2/0-3 AL THHN<br>(BLACK/RED/WHITE)      | 4 ALUMINUM<br>(BARE)     | 55-72-07-99  | 705                | 1.276                     |
| 2/0-4 AL THHN<br>(BLACK/RED/BLUE/WHITE) | 4 ALUMINUM<br>(BARE)     | 55-72-56-99  | 893                | 1.401                     |
| 3/0-3 AL THHN<br>(BLACK/RED/WHITE)      | 4 ALUMINUM<br>(BARE)     | 55-87-67-99  | 833                | 1.38                      |
| 3/0-4 AL THHN<br>(BLACK/RED/BLUE/WHITE) | 4 ALUMINUM<br>(BARE)     | 60-52-95-99  | 1138               | 1.61                      |
| 4/0-3 AL THHN<br>(BLACK/RED/WHITE)      | 2 ALUMINUM<br>(BARE)     | 55-72-15-99  | 1089               | 1.59                      |
| 4/0-4 AL THHN<br>(BLACK/RED/BLUE/WHITE) | 2 ALUMINUM<br>(BARE)     | 55-72-64-99  | 1374               | 1.74                      |
| 250-3 AL THHN<br>(BLACK/RED/WHITE)      | 2 ALUMINUM<br>(BARE)     | 55-80-56-99  | 1275               | 1.73                      |
| 250-3 AL THHN<br>(BLACK/RED/WHITE)      | 1 ALUMINUM<br>(BARE)     | 55-96-47-99  | 1292               | 1.735                     |
| 250-4 AL THHN<br>(BLACK/RED/BLUE/WHITE) | 1 ALUMINUM<br>(BARE)     | 60-70-69-99  | 1635               | 1.91                      |
| 300-3 AL THHN<br>(BLACK/RED/WHITE)      | 1 ALUMINUM<br>(BARE)     | 55-42-78-99  | 1474               | 1.84                      |
| 300-4 AL THHN<br>(BLACK/RED/BLUE/WHITE) | 1 ALUMINUM<br>(BARE)     | 60-79-78-99  | 1873               | 2.02                      |
| 350-3 AL THHN<br>(BLACK/RED/WHITE)      | 1 ALUMINUM<br>(BARE)     | 56-05-08-99  | 1653               | 1.94                      |
| 350-4 AL THHN<br>(BLACK/RED/BLUE/WHITE) | 1/0 ALUMINUM<br>(BARE)   | 60-70-77-99  | 2129               | 2.13                      |
| 350-4 AL THHN<br>(BLACK/RED/BLUE/WHITE) | 4/0 ALUMINUM<br>(BARE)   | 56-12-85-99  | 2274               | 2.38                      |
| 400-3 AL THHN<br>(BLACK/RED/WHITE)      | 1 ALUMINUM<br>(BARE)     | 55-77-73-99  | 1830               | 2.04                      |
| 400-4 AL THHN<br>(BLACK/RED/BLUE/WHITE) | 3/0 ALUMINUM<br>(BARE)   | 55-51-17-99  | 2420               | 2.24                      |
| 500-3 AL THHN<br>(BLACK/RED/WHITE)      | 1 ALUMINUM<br>(BARE)     | 55-72-23-99  | 2177               | 2.2                       |
| 500-3 AL THHN<br>(BLACK/RED/WHITE)      | 2/0 ALUMINUM<br>(BARE)   | 55-48-47-99  | 2224               | 2.202                     |
| 500-3 AL THHN<br>(BROWN/ORANGE/YELLOW)  | 3/0 ALUMINUM<br>(BARE)   | 67-89-44-99  | 2254               | 2.202                     |
| 500-3 AL THHN<br>(BLACK/RED/WHITE)      | 250 ALUMINUM<br>(BARE)   | 56-12-53-99  | 2373               | 2.42                      |
| 500-4 AL THHN<br>(BLACK/RED/BLUE/WHITE) | 3/0 ALUMINUM<br>(BARE)   | 60-70-85-99  | 2577               | 2.42                      |
| 500-4 AL THHN<br>(BLACK/RED/BLUE/WHITE) | 250 ALUMINUM<br>(BARE)   | 55-27-47-99  | 2955               | 2.42                      |
| 600-3 AL THHN<br>(BLACK/RED/WHITE)      | 1/0 ALUMINUM<br>(BARE)   | 60-07-59-99  | 2608               | 2.42                      |
| 600-3 AL THHN<br>(BLACK/RED/WHITE)      | 400 ALUMINUM<br>(BARE)   | 56-36-08-99  | 2930               | 2.662                     |
| 600-4 AL THHN<br>(BLACK/RED/BLUE/WHITE) | 3/0 ALUMINUM<br>(BARE)   | 60-70-93-99  | 3416               | 2.66                      |
| 600-4 AL THHN<br>(BLACK/RED/BLUE/WHITE) | 400 ALUMINUM<br>(BARE)   | 55-24-83-99  | 3684               | 2.94                      |

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AlumaFlex™ Type MC AL THHN/THWN-2 Conductors

|   |                         |             |      |       |
|---|-------------------------|-------------|------|-------|
| 750-3 AL THHN<br>(BLACK/RED/WHITE)          | 1/0 ALUMINUM<br>(BARE)  | 55-72-31-99 | 3118 | 2.63  |
| 750-3 AL THHN<br>(BLACK/RED/WHITE)          | 3/0 ALUMINUM<br>(BARE)  | 55-48-49-99 | 3177 | 2.63  |
| 750-3 AL THHN<br>(BLACK/RED/WHITE)          | 750 ALUMINUM<br>(BARE)  | 56-35-99-99 | 3777 | 2.891 |
| 750-4 AL THHN<br>(BLACK/RED/BLUE/WHITE)     | 3/0 ALUMINUM<br>(BARE)  | 60-71-01-99 | 4089 | 2.9   |
| 750-4 AL THHN<br>(BLACK/RED/BLUE/WHITE)     | 750 ALUMINUM<br>(BARE)  | 56-16-02-99 | 4696 | 3.2   |
| 900-4 AL THHN<br>(BLACK/RED/BLUE/WHITE)     | 250 ALUMINUM<br>(BARE)  | 55-98-33-99 | 4833 | 3.11  |
| <b>CONDUCTOR COLORS 277/480V</b>            |                         |             |      |       |
| 1/0-3 AL THHN<br>(BROWN/ORANGE/YELLOW)      | 4 ALUMINUM<br>(BARE)    | 56-54-27-99 | 602  | 1.190 |
| 1/0-4 AL THHN<br>(BROWN/ORANGE/YELLOW/GRAY) | 4 ALUMINUM<br>(BARE)    | 56-33-65-99 | 758  | 1.304 |
| 2/0-3 AL THHN<br>(BROWN/ORANGE/YELLOW)      | 4 ALUMINUM<br>(BARE)    | 56-54-29-99 | 705  | 1.276 |
| 2/0-4 AL THHN<br>(BROWN/ORANGE/YELLOW/GRAY) | 4 ALUMINUM<br>(BARE)    | 56-33-74-99 | 893  | 1.40  |
| 3/0-3 AL THHN<br>(BROWN/ORANGE/YELLOW)      | 4 ALUMINUM<br>(BARE)    | 56-28-11-99 | 833  | 1.38  |
| 3/0-4 AL THHN<br>(BROWN/ORANGE/YELLOW/GRAY) | 4 ALUMINUM<br>(BARE)    | 55-98-94-99 | 1138 | 1.61  |
| 4/0-3 AL THHN<br>(BROWN/ORANGE/YELLOW)      | 2 ALUMINUM<br>(BARE)    | 56-27-08-99 | 1089 | 1.59  |
| 4/0-3 AL THHN<br>(BROWN/ORANGE/YELLOW)      | 2 ALUMINUM<br>(GREEN)   | 64-33-40-99 | 1124 | 1.63  |
| 4/0-4 AL THHN<br>(BROWN/ORANGE/YELLOW/GRAY) | 2 ALUMINUM<br>(BARE)    | 55-98-96-99 | 1374 | 1.74  |
| 250-3 AL THHN<br>(BROWN/ORANGE/YELLOW)      | 2 ALUMINUM<br>(BARE)    | 56-28-16-99 | 1292 | 1.73  |
| 250-3 AL THHN<br>(BROWN/ORANGE/YELLOW)      | 1 ALUMINUM<br>(BARE)    | 56-28-16-99 | 1293 | 1.73  |
| 250-4 AL THHN<br>(BROWN/ORANGE/YELLOW/GRAY) | 1 ALUMINUM<br>(BARE)    | 55-99-04-99 | 1634 | 1.9   |
| 300-3 AL THHN<br>(BROWN/ORANGE/YELLOW)      | 1 ALUMINUM<br>(BARE)    | 56-28-18-99 | 1474 | 1.84  |
| 300-4 AL THHN<br>(BROWN/ORANGE/YELLOW/GRAY) | 1 ALUMINUM<br>(BARE)    | 55-99-07-99 | 1873 | 2.02  |
| 350-3 AL THHN<br>(BROWN/ORANGE/YELLOW)      | 1 ALUMINUM<br>(BARE)    | 56-30-52-99 | 1653 | 1.942 |
| 350-4 AL THHN<br>(BROWN/ORANGE/YELLOW/GRAY) | 1/0 ALUMINUM<br>(BARE)  | 55-99-09-99 | 2129 | 2.13  |
| 400-3 AL THHN<br>(BROWN/ORANGE/YELLOW)      | 3/0 ALUMINUM<br>(BARE)  | 56-27-04-99 | 1910 | 2.035 |
| 400-4 AL THHN<br>(BROWN/ORANGE/YELLOW/GRAY) | 3/0 ALUMINUM<br>(BARE)  | 55-99-11-99 | 2420 | 2.23  |
| 500-3 AL THHN<br>(BROWN/ORANGE/YELLOW)      | 2/0 ALUMINUM<br>(BARE)  | 56-27-06-99 | 2224 | 2.201 |
| 500-3 AL THHN<br>(BROWN/ORANGE/YELLOW)      | 2/0 ALUMINUM<br>(GREEN) | 58-62-27-99 | 2279 | 2.238 |
| 500-3 AL THHN<br>(BROWN/ORANGE/YELLOW)      | 350 ALUMINUM<br>(GREEN) | 67-57-37-99 | 2580 | 2.568 |
| 500-4 AL THHN<br>(BROWN/ORANGE/YELLOW/GRAY) | 3/0 ALUMINUM<br>(BARE)  | 55-99-15-99 | 2877 | 2.42  |
| 600-3 AL THHN<br>(BROWN/ORANGE/YELLOW)      | 3/0 ALUMINUM<br>(BARE)  | 56-54-36-99 | 2667 | 2.415 |
| 600-3 AL THHN<br>(BROWN/ORANGE/YELLOW)      | 400 ALUMINUM<br>(BARE)  | 57-33-66-99 | 2930 | 2.662 |

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|   |                        |             |      |       |
|---|------------------------|-------------|------|-------|
| 600-4 AL THHN<br>(BROWN/ORANGE/YELLOW/GRAY)   | 3/0 ALUMINUM<br>(BARE) | 55-99-17-99 | 3415 | 2.66  |
| 600-4 AL THHN<br>(BROWN/ORANGE/YELLOW/GRAY)   | 400 ALUMINUM<br>(BARE) | 55-98-69-99 | 3684 | 2.94  |
| 750-3 AL THHN<br>(BROWN/ORANGE/YELLOW)  | 1/0 ALUMINUM<br>(BARE) | 56-30-46-99 | 3118 | 2.620 |
| 750-3 AL THHN<br>(BROWN/ORANGE/YELLOW)  | 3/0 ALUMINUM<br>(BARE) | 56-54-43-99 | 3177 | 2.620 |
| 750-4 AL THHN<br>(BROWN/ORANGE/YELLOW/GRAY)   | 3/0 ALUMINUM<br>(BARE) | 55-99-19-99 | 4089 | 2.9   |
| 750-4 AL THHN<br>(BROWN/ORANGE/YELLOW/GRAY)   | 750 ALUMINUM<br>(BARE) | 64-70-27-99 | 4699 | 3.2   |
| 900-4 AL THHN<br>(BROWN/ORANGE/YELLOW/GRAY)   | 250 ALUMINUM<br>(BARE) | 55-98-66-99 | 4836 | 3.11  |
| * Available with oversize grounding conductor when used for parallel feeds on special orders.<br>** For allowable ampacities, refer to NEC 310.15 |                        |             |      |       |

## FEATURES

- Lightweight aluminum armor--as much as 45% lighter than steel MC Cable.
- Available with Southwire pulling heads and on stacked reels
- Available in custom constructions and lengths
- UL Classified 1, 2, and 3 hour Through Penetration Firestop Systems: W-J-3037, W-L-3110, W-L-3113, W-L-3117, W-L-3120, W-L-3121, W-L-3160, C-AJ-3115, C-AJ-3140, C-AJ-3142, C-AJ-3145, C-AJ-3173, C-AJ-3202, C-AJ-4065, C-AJ-4066, F-C-3038.
- Cable reverse wound on reel for ease of pulling and installation. When pulling from coils, pull from inside to ensure ease of installation.
- Anti-short bushings are not required for use with MC cable per the NEC and UL

## COLOR CODING, Standard Products

| Phase Conductors    |                         |                             |
|---------------------|-------------------------|-----------------------------|
| No. of Conductors   | Color Sequence 120/208Y | Color Sequence 277/480Y     |
| 3                   | Black, Red, White       | Brown, Orange, Gray         |
| 4                   | Black, Red, Blue, White | Brown, Orange, Yellow, Gray |
| Grounding Conductor | Bare                    | Bare                        |

Color sequence for other special colors are available subject to economic order quantity.

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NEC TABLE 310.15(B)(16)- ALLOWABLE AMPACITY FOR 600V CONDUCTORS

| SIZE AWG OR<br>KCMIL   | TEMPERATURE RATING OF CONDUCTOR |   |  |
|--|---------------------------------|---|--|
|  | 60°C (140°F)                    | 75°C (167°F)  | 90°C (194°F)   |
|  | Types: TW, UF                   | Types: RHW,<br>THHW, THW,<br>THWN, XHHW,<br>USE, ZW | Types: TBS, SA, SIS, RHH,<br>RHW-2, THHN, THHW, THW-<br>2, THWN-2, USE-2, XHH,<br>XHHW, XHHW-2, ZW-2 |
| ALUMINUM or COPPER-CLAD ALUMINUM   |                                 |   |  |
| 18   | -                               | -   | -  |
| 16   | -                               | -   | -  |
| 14   | -                               | -   | -  |
| 12   | 15                              | 20  | 25   |
| 10   | 25                              | 30  | 35   |
| 8  | 35                              | 40  | 45   |
| 6  | 40                              | 50  | 55   |
| 4  | 55                              | 65  | 75   |
| 3  | 65                              | 75  | 85   |
| 2  | 75                              | 90  | 100  |
| 1  | 85                              | 100   | 115  |
| 1/0  | 100                             | 120   | 135  |
| 2/0  | 115                             | 135   | 150  |
| 3/0  | 130                             | 155   | 175  |
| 4/0  | 150                             | 180   | 205  |
| 250  | 170                             | 205   | 230  |
| 300  | 195                             | 230   | 260  |
| 350  | 210                             | 250   | 280  |
| 400  | 225                             | 270   | 305  |
| 500  | 260                             | 310   | 350  |
| 600  | 285                             | 340   | 385  |
| 700  | 315                             | 375   | 425  |
| 750  | 320                             | 385   | 435  |
| 800  | 330                             | 395   | 445  |
| 900  | 355                             | 425   | 480  |
| 1000   | 375                             | 445   | 500  |
| 1250   | 405                             | 485   | 545  |
| 1500   | 435                             | 520   | 585  |
| 1750   | 455                             | 545   | 615  |
| 2000   | 470                             | 560   | 630  |
| Per NEC 310.15(B)(5), the ampacity of 4/C cables shall be reduced by a factor of 0.80 when the neutral is considered a current-carrying conductor. |                                 |   |  |

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