# 3/C CU 5KV 100% & 133% XLPE/PVC RHINOPOWER™ Type MP-GC. MSHA Approved

Class B Copper conductors, Cross-Linked Polyethylene (XLP) 100% & 133% Insulation Level, Copper Tape Shield, Polyvinyl Chloride (PVC) Jacket, 90°C




Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** Class B compact stranded bare copper per ASTM B3 and ASTM B496
2. **Conductor Shield:** Semi-conducting cross-linked copolymer
3. **Insulation:** Cross-Linked Polyethylene (XLP) 100% and 133% Insulation Level
4. **Insulation Shield:** Strippable semi-conducting cross-linked copolymer
5. **Copper Tape Shield:** Helically wrapped 5 mil copper tape with 25% overlap
6. **Grounding Conductors:** Two Class B compressed stranded bare copper per ASTM B3 and ASTM B8
7. **Ground Check:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8 with yellow high strength, polypropylene insulation
8. **Filler:** Rubber Fillers as needed
9. **Reinforcement:** Tape and Reinforcing twine applied over the core for improved mechanical integrity and ease of stripping
10. **Jacket:** Black Polyvinyl Chloride (PVC). Alternate jacket colors available.
11. **Reflective Stripe:** Highly visible reflective stripe embedded into the outer jacket to increase safety and help prevent cable runover (optional, contact your sales representative for part number)

## APPLICATIONS AND FEATURES:

RHINOPOWER™ Type MP-GC mine power feeder cable is a heavy-duty power cable for use in stationary horizontal HV mine power distribution circuits, for permanent or semi-portable applications with power transmission in deep mines, surface mines, open pits, tunnels, in conduit or duct (not to exceed max rated voltage), and suitable for direct burial in wet or dry locations. For vertical drop requirements consult with factory application specialist.

## SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B496 Compact Round Concentric-lay-standard copper
- ICEA S-75-381 Portable and Power Feeder Cables for Use in Mines
- MSHA Approved



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## SAMPLE PRINT LEGEND:

SOUTHWIRE (R) RHINO™ BRAND CABLE # AWG COMPACT CU 3/C TYPE MP-GC 5000V 100% INS. LEVEL 90°C P-07-K130025 MSHA

### Table 1 – Weights and Measurements

| Stock Number | Cond. Size | Cond. Number | Cond. Strands | Diameter Over Conductor | Insul. Thickness | Diameter Over Insulation | Ground | Ground Check Size | Jacket Thickness | Approx. OD | Approx. Weight | Jacket Color |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AWG/ Kcmil | No. | No. | inch | mil | inch | No. x AWG | AWG | mil | inch | lb/1000ft | |
| 577276 | 4 | 3 | 7 | 0.212 | 90 | 0.440 | 2 x 8 | 8 | 110 | 1.320 | 1158 | BK |
| 580827 | 2 | 3 | 7 | 0.268 | 90 | 0.478 | 2 x 6 | 8 | 115 | 1.565 | 1686 | BK |
| 592868 | 1 | 3 | 19 | 0.298 | 90 | 0.506 | 2 x 5 | 8 | 110 | 1.530 | 1779 | BK |
| 584648 | 1/0 | 3 | 19 | 0.336 | 90 | 0.546 | 2 x 4 | 8 | 160 | 1.630 | 2149 | BK |
| TBA | 4/0 | 3 | 19 | 0.475 | 90 | 0.691 | 2 x 1 | 8 | 140 | 2.000 | 3475 | BK |
| TBA | 250 | 3 | 37 | 0.520 | 90 | 0.736 | 2 x 1/0 | 8 | 140 | 2.130 | 4620 | BK |
| 578162 | 500 | 3 | 37 | 0.735 | 90 | 0.946 | 2 x 4/0 | 8 | 140 | 2.550 | 7416 | BK |

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
* Strand count meets minimum number per ASTM
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

### Table 2 – Electrical and Engineering Data

| Cond. Size | DC Resistance @ 25°C | AC Resistance @ 90°C | Capacitive Reactance | Inductive Reactance | Working Tension | Min Bending Radius | Allowable Ampacity In Air 90°C |
|---|---|---|---|---|---|---|---|
| AWG/ Kcmil | Ω/1000ft | Ω/1000ft | MΩ*1000ft | Ω/1000ft | lb | inch | Amp |
| 4 | 0.258 | 0.325 | 0.049 | 0.038 | 285 | 15.8 | 122 |
| 2 | 0.162 | 0.204 | 0.039 | 0.035 | 453 | 18.7 | 159 |
| 1 | 0.128 | 0.162 | 0.036 | 0.034 | 572 | 18.3 | 184 |
| 1/0 | 0.102 | 0.128 | 0.033 | 0.033 | 722 | 19.5 | 211 |
| 4/0 | 0.052 | 0.065 | 0.024 | 0.032 | 1446 | 24.0 | 321 |
| 250 | 0.044 | 0.055 | 0.023 | 0.031 | 1709 | 25.6 | 355 |
| 500 | 0.022 | 0.030 | 0.017 | 0.028 | 3420 | 30.6 | 539 |

***** Ampacities based upon ICEA S-75-381 Table I-1.
***** Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.


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