3/C CU 5KV Type SHD-GC RHINOSHIELD™ CPE Mining Cable 90°C. CSA - MSHA Approved

Flexible Copper conductors, EPR 100% Insulation Level, Cu/Nylon Braid Shield, Extra Heavy Duty Two Layer Chlorinated Polyethylene (CPE) Jacket with Optional Reflective Stripes



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Tin coated, soft drawn, annealed, flexible, rope-lay stranded copper per ASTM B33/B172
2. **Separator Tape:** Semi-conducting tape applied between the conductor and insulation to facilitate stripping
3. **Conductor Shield:** Semi-conducting cross-linked copolymer
4. **Insulation:** Ethylene Propylene Rubber (EPR) 100% Insulation Level
5. **Insulation Braid Shield:** Semi-conducting SBR tape applied to the phase insulation with a 50% overlap, adhesive side up. Tin coated, soft drawn, annealed, copper braid shield (60% minimum coverage), combined with color coded nylon (black, white, red) with a 40% maximum coverage
6. **Ground Conductors:** Two uninsulated, tin coated, soft drawn, annealed, rope stranded, flexible lay copper per ASTM B33/B172
7. **Filler:** Filler as needed to make round
8. **Ground Check Conductor:** Tin coated, soft drawn, annealed, rope stranded, flexible lay copper per ASTM B33/B172 with yellow, high strength, polypropylene insulation
9. **Reinforcement:** Reinforcing twine applied between the two jacket layers
10. **Inner Jacket:** Black, mold cured, extra heavy-duty modified integral fill flame resistant, thermosetting Chlorinated Polyethylene
11. **Outer Jacket:** Black, mold cured, extra heavy-duty, flame resistant, thermosetting Chlorinated Polyethylene (CPE). Other colors available
12. **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:

RHINOSHIELD™ Type SHD-GC is a heavy-duty trailing cable where flexibility and maximum protection is required. For use with mobile, reeling, or stationary mining equipment, continuous mining machines, longwall mining systems, and blast hole drillers. It is also an excellent choice for shovels, draglines, dredges, cranes and marine shore-to-ship power supplies, and anytime extra-durable, flexible cable is required. Suitable for continuous submersion in water. Ground check conductor provides fail-safe ground monitoring. Embossed print legend for easy cable identification. Cold Bend and Impact Tested to -50°C.

SPECIFICATIONS:

- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire

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- ASTM B172 Standard Specification for Rope-Lay-Stranded Copper Conductors Having Bunch-Stranded Copper Conductors
- CSA C22.2 No. 96 Portable Power Cables
- ICEA S-75-381 Portable and Power Feeder Cables for Use in Mines

SAMPLE PRINT LEGEND:

SOUTHWIRE® RHINO{TM} BRAND CABLE XXX AWG CU 3/C EPR TYPE SHD-GC 5000V TC-ER -50°C 90°C SUN RES {CSA} LL90458 FT1 FT4 FT5 P-07-KA-140005-MSHA

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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	Inner Jacket Thickness	Jacket Thickness	Approx. OD	Approx. Weight
	AWG/ Kcmil	No.	No.	inch	mil	inch	No. x AWG	AWG	mil	mil	inch	lb/1000ft
599538^^	500	3	1221	0.987	120	1.188	2 x 4/0	6	130	150	3.293	9493

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
^ Reflective stripe with red jacket
^^ Red jacket

Table 2 – Electrical and Engineering Data

Cond. Size	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance	Working Tension	Min Bending Radius	Allowable Ampacity In Air 90°C
AWG/ Kcmil	Ω/1000ft	Ω/1000ft	Ω/1000ft	lb	inch	Amp
500	0.024	0.034	0.026	3420	26.3	536

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