3/C CU 2000V Type SHD-GC RHINOSHIELD™ CPE Mining Cable 90°C. MSHA Approved

Flexible Copper conductors, EPR insulation, 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:** Non-conducting tape applied between the conductor and insulation to facilitate stripping
3. **Insulation:** Ethylene Propylene Rubber (EPR)
4. **Braid Shield:** Tin coated, soft drawn, annealed, copper braid shield (60% minimum coverage), combined with color coded nylon (Black, Blue, Red) or (Black, White, Red) with a 40% maximum coverage
5. **Ground Check Conductor:** Tin coated, soft drawn, annealed, rope stranded, flexible lay copper per ASTM B33/B172 with high strength yellow, polypropylene insulation
6. **Ground Conductor:** Two uninsulated, tin coated, soft drawn, annealed, rope stranded, flexible lay copper per ASTM B33/B172
7. **Filler:** Rubber Fillers as needed
8. **Reinforcement:** Reinforcing twine applied over core
9. **Inner Jacket:** Black, mold cured, extra heavy-duty integral fill, flame resistant, thermosetting Chlorinated Polyethylene (CPE)
10. **Reinforcement:** Reinforcing twine applied between the two jacket layers
11. **Outer Jacket:** Black, mold cured, extra heavy-duty, flame resistant, thermosetting Chlorinated Polyethylene (CPE). Alternate jacket 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 ex- cellent 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. For vertical drop requirements consult with factory application specialist.

SPECIFICATIONS:

- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- ASTM B172 Standard Specification for Rope-Lay-Stranded Copper Conductors Having Bunch-Stranded Copper Conductors

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- ICEA S-75-381 Portable and Power Feeder Cables for Use in Mines
- CSA Listed File # LL65300 FT1, FT4, FT5 CSA C22.2, No. 96 Portable Power Cables
- MSHA listed: passes MSHA flame test
- Meets or exceeds ICEA requirements as applicable for ICEA S-75-381/NEMA WC 58, ASTM B-3

SAMPLE PRINT LEGEND:

SOUTHWIRE(R) RHINO(TM) BRAND CABLE XX AWG CU 3/C EPR TYPE SHD-GC 2000V -50C 90C SR CSA LL90458 FT1 FT4 FT5 P-07-KA140005-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	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
597565	6	3	133	0.198	70	0.356	1 x 10	10	70	85	1.290	1143
571729	4	3	259	0.235	70	0.400	1 x 8	8	70	110	1.400	1456
588819	1/0	3	273	0.354	80	0.549	1 x 4	8	110	135	1.860	2854
586558	2/0	3	324	0.400	80	0.586	2 x 3	8	90	115	1.970	3058
576054	4/0	3	532	0.550	80	0.751	2 x 1	8	85	200	2.310	4408
590697	350	3	855	0.809	100	0.926	1 x 2/0	8	100	135	2.810	6127

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
^ Blue overall jacket
* CSA product

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
6	0.450	0.568	0.035	179	10.3	93
4	0.282	0.356	0.034	285	11.2	122
1/0	0.113	0.143	0.032	722	14.8	211
2/0	0.090	0.114	0.030	910	15.7	243
4/0	0.057	0.073	0.029	1447	18.4	321
350	0.035	0.046	0.025	2394	22.4	435

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