

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 Single Layer Chlorinated Polyethylene (CPE) Jacket with Optional Reflective Stripes



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

- Conductor:** Tin coated, soft drawn, annealed, flexible, rope-lay stranded copper per ASTM B33/B172
- Separator Tape:** Non-conducting tape applied between the conductor and insulation to facilitate stripping
- Insulation:** Ethylene Propylene Rubber (EPR)
- Braid Shield:** Tin coated, soft drawn, annealed, copper braid shield (60% minimum coverage), combined with colour coded nylon (Black, Blue, Red) with a 40% maximum coverage
- Ground Check Conductor:** Tin coated, soft drawn, annealed, rope stranded, flexible lay copper per ASTM B33/B172 with high strength yellow, polypropylene insulation
- Ground Conductor:** Two uninsulated, tin coated, soft drawn, annealed, rope stranded, flexible lay copper per ASTM B33/B172
- Filler:** Rubber Fillers as needed
- Reinforcement:** Reinforcing twine applied over core
- Outer Jacket:** Black, mold cured, extra heavy-duty, flame resistant, thermosetting Chlorinated Polyethylene (CPE). Alternate jacket colors available
- 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. 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
- 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



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Services

- 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
 MASTER-DESIGN 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	Jacket Thickness	Approx. OD	Approx. Weight
	AWG/ Kcmil	No.	No.	inch	mil	inch	No. x AWG	AWG	mil	inch	lb/1000ft
678035	14	3	41	0.073	60	0.200	2 x 14	14	130	0.852	360
569653	12	3	65	0.094	70	0.235	2 x 12	12	155	0.950	493
569654	10	3	104	0.117	60	0.240	2 x 12	12	155	1.000	554
569655	8	3	168	0.153	70	0.301	2 x 10	10	145	1.093	741
649339	4	3	259	0.235	70	0.400	2 x 8	8	180	1.366	1227
587868	2	3	308	0.302	70	0.466	2 x 7	8	180	1.535	1744
587863	1/0	3	273	0.354	80	0.557	2 x 4	8	290	1.850	2535
586860 [^]	1	3	385	0.397	80	0.512	2 x 6	8	235	1.732	2250
584907	2/0	3	324	0.400	80	0.586	2 x 4	8	270	1.956	2768
586387	4/0	3	532	0.550	80	0.751	2 x 2	8	260	2.298	3873

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

[^] Blue overall 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
14	2.814	3.391	0.058	28	6.8	-
12	1.774	2.137	0.054	45	7.6	-
10	1.111	1.339	0.050	71	8.0	49
8	0.715	0.861	0.052	113	8.7	69
4	0.282	0.340	0.048	285	10.9	122
2	0.179	0.216	0.045	454	12.3	159
1/0	0.113	0.136	0.044	722	14.8	211
1	0.143	0.172	0.046	572	13.9	184
2/0	0.090	0.108	0.043	910	15.6	243
4/0	0.057	0.069	0.041	1446	18.4	321

* Inductive impedance is based on non-ferrous conduit with one diameter spacing.

