

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 colour coded nylon (Black, Blue, 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 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



Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com



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Services

- 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
- 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 Size	Ground Strands	Ground Check Size	Ground Check Strands	Ground Check Insulation Thickness	Jacket Thickness	Approx. OD	Approx. Weight
	AWG/ Kcmil	No.	No.	inch	mil	inch	AWG	No.	AWG	No.	mil	mil	inch	lb/1000ft
597565	6	3	133	0.21	70	0.356	10	104	10	104	40	155	1.29	1144
571729	4	3	259	0.256	70	0.4	8	168	8	168	55	110	1.400	1456
TBA	3	3	259	0.285	70	0.461	7	49	8	168	45	170	1.51	1690
641341	3/0	3	418	0.506	80	0.672	2	308	8	168	55	270	2.13	3652
576054	4/0	3	532	0.577	80	0.751	1	385	8	168	45	200	2.31	4408
TBA	250	3	608	0.61	95	0.836	1/0	273	6	133	60	220	2.51	5750
647217	350	3	855	0.72	100	0.926	2/0	324	6	133	55	235	2.8	6205
640977	500	3	1221	0.9	100	1.106	4/0	532	6	133	55	347	3.19	9022

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

Stock Number	Cond. Size	Cond. Number	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	No.	Ω/1000ft	Ω/1000ft	MΩ*1000ft	MΩ/1000ft	lb	inch	Amp
597565	6	3	0.421	0.526	0.033	0.036	179.000	7.7	93
571729	4	3	0.267	0.334	0.028	0.034	285.000	8.4	122
TBA	3	3	0.212	0.265	0.026	0.033	360.000	9.1	140
641341	3/0	3	0.067	0.084	0.018	0.029	1147.000	12.8	279
576054	4/0	3	0.053	0.066	0.016	0.028	1446	13.9	321
TBA	250	3	0.045	0.056	0.017	0.029	1709.000	15.1	355
647217	350	3	0.032	0.040	0.015	0.028	2393.000	16.9	435
640977	500	3	0.023	0.029	0.012	0.027	3418.000	19.1	536

† Ampacity based on ICEA S-75-381 Table H-1 and is for a single isolated cable in air operated with an open-circuited shield at an ambient temperature of 40°C and a conductor temperature of 90°C

†† Ampacity for #8 AWG is not present in the ICEA table. This value was calculated by Southwire Engineers.

^ Blue overall jacket

