

3/C CU 8KV Type SHD-GC RHINOSHIELD™ CPE Mining Cable 90°C

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 Shield:** Semi-conducting cross-linked copolymer
6. **Shield Separator:** Semi-conducting SBR tape applied to the phase insulation with a 50% overlap, adhesive side up
7. **Braid Shield:** Tin coated, soft drawn, annealed, copper braid shield (60% minimum coverage), combined with color coded nylon (black, white, red) with a 40% maximum coverage
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. **Ground Conductors:** Two uninsulated, tin coated, soft drawn, annealed, rope stranded, flexible lay copper per ASTM B33/B172
10. **Tape:** SBR tape applied over the cabled core for improved mechanical integrity and ease of stripping
11. **Inner Jacket:** Black, mold cured, extra heavy-duty modified integral fill flame resistant, thermosetting Chlorinated Polyethylene
12. **Reinforcement:** Reinforcing twine applied between the two jacket layers
13. **Outer Jacket:** Black, mold cured, extra heavy-duty, flame resistant, thermosetting Chlorinated Polyethylene (CPE). Other colors available
14. **Reflective Stripe:** Highly visible reflective stripe embedded into the outer jacket to increase safety and help prevent cable run-over (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

**CABLETECH
SUPPORT™**

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™ BRAND CABLE # AWG CU 3/C EPR TYPE SHD-GC 8000V -50°C 90°C 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
TBA	4	3	259	0.256	150	0.622	8	168	8	168	45	205	1.94	2270
TBA	3	3	259	0.285	150	0.651	7	49	8	168	45	205	2.02	2530
TBA	2	3	308	0.32	150	0.588	6	133	8	168	60	120	2.12	2860
647533 [^]	2	3	308	0.338	150	0.668	6	133	6	133	60	220	2.09	2484
TBA	1	3	385	0.355	150	0.721	5	133	8	168	45	220	2.21	3230
672495 ^{^^}	1/0	3	273	0.385	150	0.728	4	259	8	168	60	220	2.29	3492
TBA	1/0	3	273	0.385	150	0.751	4	259	8	168	45	220	2.32	3720
584837	2/0	3	324	0.42	150	0.768	3	259	8	168	60	235	2.46	4353
TBA	3/0	3	418	0.506	150	0.872	2	308	8	168	45	250	2.62	5050
593106	4/0	3	532	0.577	150	0.92	1	385	8	168	60	250	2.72	5236
679452 [*]	4/0	3	532	0.577	150	0.929	1	385	8	168	45	150	2.75	4877
TBA	250	3	608	0.61	150	0.976	1/0	273	6	133	60	250	2.89	6710
678418 [*]	350	3	855	0.72	150	1.072	2/0	324	6	133	60	150	3.175	7740
TBA	300	3	735	0.737	150	1.103	1/0	273	6	133	60	265	3.04	7410
679502 [*]	500	3	1221	0.9	150	1.248	4/0	532	6	133	60	160	3.56	9100

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

* Yellow Overall Jacket

[^] Black with stripe

^{^^} Orange Jacket



Southwire



Services

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
TBA	4	3	0.267	0.334	0.048	0.044	285.000	15.5	122
TBA	3	3	0.212	0.265	0.045	0.043	360.000	16.2	140
TBA	2	3	0.168	0.210	0.041	0.041	454.000	17	159
647533 [^]	2	3	0.168	0.210	0.041	0.041	454.000	17	159
TBA	1	3	0.133	0.166	0.038	0.040	572.000	17.7	184
672495 ^{^^}	1/0	3	0.111	0.139	0.036	0.039	722.000	18.6	211
TBA	1/0	3	0.111	0.139	0.036	0.039	722.000	18.6	211
584837	2/0	3	0.085	0.106	0.034	0.038	910.000	19.7	243
TBA	3/0	3	0.067	0.084	0.029	0.036	1147.000	21	279
593106	4/0	3	0.053	0.066	0.027	0.034	1446.000	22	321
679452 [*]	4/0	3	0.053	0.066	0.027	0.034	1446.000	22	321
TBA	250	3	0.045	0.056	0.025	0.034	1709.000	23.1	355
678418 [*]	350	3	0.032	0.040	0.022	0.032	2393	25.6	435
TBA	300	3	0.037	0.046	0.022	0.032	2051.000	24.3	398
679502 [*]	500	3	0.023	0.029	0.018	0.031	3418.000	28.5	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

* Yellow Overall Jacket

[^] Black with stripe

^{^^} Orange Jacket

