

UL 3/C CU 25KV 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 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



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
- MSHA Approved

SAMPLE PRINT LEGEND:

SOUTHWIRE (R) RHINO™ BRAND CABLE # AWG CU 3/C EPR TYPE SHD-GC 25000V -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	1	3	385	0.355	260	0.941	5	133	8	168	45	265	2.95	5,000
TBA	1/0	3	273	0.385	260	0.971	4	259	8	168	45	265	3.05	5,530
TBA	2/0	3	324	0.420	260	1.006	3	259	8	168	45	280	3.20	6,280
TBA	3/0	3	418	0.506	260	1.092	2	308	8	168	45	280	3.33	7,000
599032	4/0	3	532	0.577	260	1.163	1	385	2	308	60	165	3.50	6450
TBA	250	3	608	0.610	260	1.196	1/0	273	6	133	60	295	3.54	8,630
TBA	350	3	855	0.720	260	1.306	2/0	324	6	133	60	295	3.85	10,710
TBA	500	3	1221	0.900	260	1.486	4/0	532	6	133	60	310	4.25	13,800

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

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	1	3	0.133	0.166	0.046	0.053	572	23.6	191
TBA	1/0	3	0.111	0.139	0.044	0.050	722	24.4	218
TBA	2/0	3	0.085	0.106	0.043	0.047	910	25.6	249
TBA	3/0	3	0.067	0.084	0.041	0.042	1147	26.6	286
599032	4/0	3	0.053	0.066	0.039	0.038	1446	28.0	327
TBA	250	3	0.045	0.056	0.038	0.036	1709	28.3	360
TBA	350	3	0.032	0.040	0.036	0.032	2393	30.8	438
TBA	500	3	0.023	0.029	0.034	0.027	3418	34.0	481

† 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

