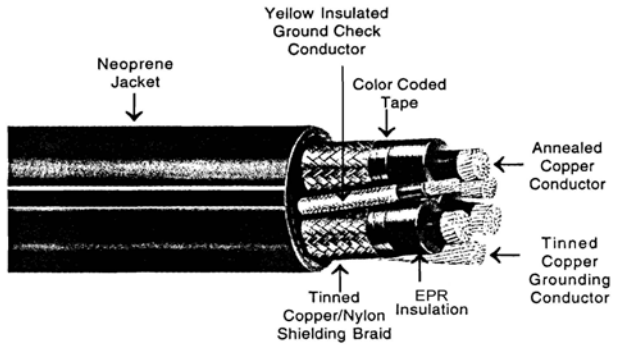
TYPE SHD-GC - Three Conductor

Portable Power Cable
Three Conductor Round - Type SHD-GC, 2000 Volts

APPLICATION: Heavy duty Portable Power Cable for use with longwall miners, and mobile mining equipment such as continuous miners, cutters, loaders, conveyors, drills or pumps. For use in circuits not exceeding 2000 volts, maximum conductor temperature of 90°C. For three-phase medium voltage ac operation where the individual insulated phase conductors are required to be shielded, grounding conductors and a ground check conductor are required.

STANDARDS: Conforms to ICEA S-75-381 (NEMA WC58).

CONSTRUCTION: Three insulated conductors consisting of flexible stranded tinned copper, EPR ethylene-propylene rubber insulation, color coded tape, tinned copper/nylon shielding braid. Two uninsulated flexible stranded annealed tinned copper grounding conductors. One flexible stranded annealed copper, insulated ground check conductor. Three insulated and shielded conductors cabled together with the ground check conductor in the valley between the Black and White conductors and one grounding conductor in each of the other two valleys, overall two-layer reinforced Neoprene jacket vulcanized in a metal mold. Embossed marking molded as an integral part of the jacket, including the inscription P-105-MSHA indicating full compliance with Federal and State of Pennsylvania Safety Codes.



USAWC Part #	Size AWG or kcmil	No. of Strands	Insulation Thickness Mils	Grounding Conductor Size AWG	Ground Check Conductor Size AWG	Jacket Thickness Mils	Nominal Diameter Inches	Approx. Net Wt. lbs/1000 ft	Copper Weight lbs/1000 ft	Ampacity	
										20°C Ambient	40°C Ambient
6-03SHDGC2KV	6	168	70	10	10	155	1.29	1170	474	110	93
4-03SHDGC2KV	4	259	70	8	10	155	1.40	1470	666	144	122
3-03SHDGC2KV	3	329	70	7	8	170	1.51	1720	789	165	140
2-03SHDGC2KV	2	259	70	6	8	170	1.59	1940	989	188	159
1-03SHDGC2KV	1	329	80	5	8	190	1.76	2410	1195	217	184
1/0-03SHDGC2KV	1/0	259	80	4	8	190	1.86	2840	1466	249	211
2/0-03SHDGC2KV	2/0	329	80	3	8	205	2.00	3370	1798	287	243
3/0-03SHDGC2KV	3/0	413	80	2	8	205	2.13	3970	2215	329	279
4/0-03SHDGC2KV	4/0	532	80	1	8	220	2.31	4780	2741	379	321
250-03SHDGC2KV	250	608	95	1/0	6	220	2.51	5560	3280	419	355
300-03SHDGC2KV	300	741	95	1/0	6	235	2.68	6460	3860	470	398
350-03SHDGC2KV	350	855	95	2/0	6	235	2.81	7360	4398	513	435
500-03SHDGC2KV	500	1221	95	4/0	6	265	3.19	10050	6304	632	536

*AMPACITY based upon continuous duty at 90 C conductor temperature, ambient temperature as indicated, cable in free air. For other ambient temperatures and when cables are used with one or more layers wound on a reel, use correction factors shown in Appendix H, ICEA S-75-381

Specification

PORTABLE POWER CABLE

Three-Conductor Round - Type SHD-GC, 2000 Volts

1. SCOPE
   1.1 This specification describes three-conductor Type SHD-GC power cable with EPR (ethylene-propylene rubber) insulation for use in circuits not exceeding 2000 volts at a maximum conductor temperature of 90°C. Cables are intended for use as heavy duty portable power cable on continuous miners, cutters, loaders, conveyors, drills or pumps.
2. STANDARDS
   2.1 The following standard shall form a part of this specification:
      2.1.1 ICEA Pub. No. S-75-381 for Portable and Power Feeder Cables for Use in Mines and Similar Applications (NEMA WC58).
3. CONDUCTORS
   3.1 Minimum Class H stranded, annealed, tinned copper per Part 2 of ICEA.
4. INSULATION
   4.1 A homogeneous wall of EPR insulation shall be extruded over the conductor. The average thickness of the insulation shall be as specified in Table 3-21 of ICEA. The minimum thickness shall be not less than 90 percent of the specified average values.
   4.2 Physical and electrical properties of the insulation shall be in accordance with Par. 3.15 of ICEA.
5. CIRCUIT IDENTIFICATION
   5.1 Overlapped color coded tape with one conductor each black, white and red meeting the requirements of Par. 3.18 of ICEA.
6. SHIELDING
   6.1 A tinned copper/nylon combination shielding braid shall be applied over each conductor meeting the requirements of Par. 3.19 of ICEA.
7. GROUNDING CONDUCTORS
   7.1 The grounding conductors shall be stranded annealed tinned copper of not less than the size and the number of wires as shown in Table 3-24 of ICEA for the corresponding power conductor sizes.
8. GROUND CHECK CONDUCTOR
   8.1 The minimum ground check conductor shall be as given in Table 3-21 of ICEA for the corresponding power conductor sizes. A minimum of 49 strands of annealed tinned copper shall be used.
   8.2 The conductor shall have a yellow insulation meeting requirements of Par. 3.16 and will be located between the black and white phase conductors.
9. ASSEMBLY
   9.1 The conductors shall be twisted together with a left-hand lay meeting the requirements of Table 3-5 of ICEA. Sizes 250 and larger shall have fillers and a binder tape shall be helically applied over the cable assembly.
10. JACKET
   10.1 A two-layer reinforced thermosetting jacket shall be extruded over the assembly in accordance with Par. 3.21 of ICEA. For sizes 4/0 and smaller, the first layer of jacket shall be extruded into the valleys.
   10.2 The jacket shall be an extra-heavy duty Neoprene meeting the requirements of Table 3-3 of ICEA.
11. COMPLETED CABLE
   11.1 The nominal outside diameter shall be in accordance with Table 3-21 of ICEA.
   11.2 The tolerances shall be within the requirements of Par. 3.22.2 of ICEA.
12. SURFACE MARKING
   12.1 All cable shall have an embossed print legend showing manufacturer, cable type, size, voltage, MSHA and State of Pennsylvania approval number.
13. TESTS
   13.1 Cable shall be tested in accordance with ICEA.

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