

ROME 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 coated copper, Rome-EPR ethylene-propylene rubber insulation, color coded tape, tinned copper/nylon shielding braid. Two uninsulated flexible stranded annealed coated copper grounding conductors. One flexible stranded annealed copper, insulated ground check conductor. Three insulated and shielded conductors cabled together with suitable fillers 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, binder tape, 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.

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. Lb./1000 Ft.	Ampacity *	
								20°C Ambient	40°C Ambient
6	168	70	10	10	155	1.29	1170	110	93
4	259	70	8	8	155	1.40	1470	144	122
3	329	70	6	8	170	1.51	1720	165	140
2	259	70	6	8	170	1.59	1940	188	159
1	329	80	5	8	190	1.76	2410	217	184
1/0	259	80	4	8	190	1.86	2840	249	211
2/0	329	80	3	8	205	2.00	3370	287	243
3/0	418	80	2	8	205	2.13	3970	329	279
4/0	532	80	1	8	220	2.31	4780	379	321
250	427	95	1/0	6	220	2.51	5560	419	355
300	427	95	1/0	6	235	2.68	6460	470	398
350	427	95	2/0	6	235	2.81	7360	513	435
500	427	95	4/0	6	265	3.19	10050	632	536

*AMPACITY based upon continuous duty at 90°C conductor temperature, ambient temperature as indicated, 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.

⁽¹⁾Hypalon jacket may also be supplied.

Information on this sheet subject to change without notice.

Specification

ROME 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 Rome-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, coated copper per Part 2 of ICEA.

4. INSULATION

- 4.1 A homogeneous wall of Rome-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 coated 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 coated 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. Suitable fillers shall be used to produce an essentially round, cross-section in the completed cable.
9.2 A binder tape shall be helically applied over the filled 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.
10.2 The jacket shall be an extra-heavy duty Neoprene or Hypalon 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, and Mine Safety and Health Administration (MSHA) approval number.

13. TESTS

- 13.1 Cable shall be tested in accordance with ICEA.