



PaigeSpec

P7341-MN



HEAVY-DUTY MINING CABLE

MINING CABLE

SHD-GC 3/C EPR/NEOPRENE

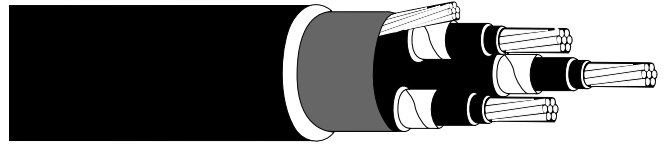
SHIELDED 5000V 90°C

WET/DRY C(UL) MSHA

STANDARDS: ICEA S-75-381/NEMA WC-58

ICEA S-68-516/NEMA WC-8

ASTM B172, ASTM B 33



1.0 APPLICATIONS:

- 1.1** These Cable are used for Heavy Duty Mining applications such as drag lines, shovels, dredges, drills, other track equipment and for power feeders in underground mines where shielding is required and Per NEC code for motors over 2400Volts. The cables are MSHA Approved.

2.0 FEATURES:

- 2.1**
- Excellent flexibility.
 - Highly ozone, sun, weather, water and flame resistant.
 - Rated and flexible at -40°C.
 - Excellent impact and abrasion resistant.
 - Oil and heat resistant.
 - Indent printed for easy identification.

3.0 CONSTRUCTION:

- 3.1 Conductors:**
Annealed flexible stranded tin coated copper in accordance with ASTM B-172 and ICEA S-75-381.
- 3.2 Conductor shielding:**
Semi-conducting layer over the conductor.
- 3.3 Insulation:**
Ethylene-propylene rubber (EPR).
- 3.4 Insulation shield:**
Non conducting bedding tape +composite tinned copper/fiber braid.
Covering minimum 60%.
- 3.5 Circuit identification:**
The nylon in the shielding braid is colored black, white, red in accordance with ICEA S-75-381.

3.6 Grounding conductors:

Annealed tin coated copper as per Tab. 3-24 of ICEA S-75-381.

3.7 Ground check:

Annealed tin coated copper as per Tab. 3-21 of ICEA S-75-381. Color of insulation: yellow

3.8 Assembly:

Three power, ground check and two non-insulated grounding conductors cabled together. Single faced rubber filled binder tape applied overall. Integral filled jacket for higher torsion resistance.

3.9 Jacket:

A reinforced NEOPRENE, CPE, TPU optional jacket available.
Type extra heavy duty in accordance with Par. 3.21 of ICEA S-75-381.

3.10 Color of jacket:

Black, other colors available upon request

4.0 APPROVALS

4.1 MSHA:

- 3.1.1 P-7K-254029-1 (Neoprene)
3.1.2 P-7K-268101 (CPE)
3.1.3 P-07-KA030001 (TPU)

4.2 Standard length cable packing:

1000 ft reels. Other forms of packaging available upon request.

5.0

POWER CONDUCTOR SIZE	POWER CONDUCTOR STRANDING		GROUND CHECK COND. SIZE	GROUNDING CONDUCTOR		NOMINAL INSULATION THICKNESS	NOMINAL JACKET THICKNESS	APPROX. O.D.		APPROX. WEIGHT		
	AWG or MCM	NO. OF WIRES		AWG	AWG			NO. OF WIRES	INCHES	INCHES	INCHES	MM
6 AWG	133	7x19	8	10	49	7x7	0.110	0.185	1.56	39.6	1460	2173
4 AWG	259	7x37	8	8	133	7x19	0.110	0.185	1.68	42.7	1769	2633
2 AWG	259	7x37	8	6	133	7x19	0.110	0.205	1.87	47.5	2370	3527
1 AWG	259	7x37	8	5	133	7x19	0.110	0.205	1.95	49.5	2660	3959
1/0 AWG	266	19x14	8	4	259	7x37	0.110	0.220	2.08	52.8	3200	4762
2/0 AWG	342	19x18	8	3	259	7x37	0.110	0.220	2.20	55.9	3615	5380
3/0 AWG	418	19x22	8	2	259	7x37	0.110	0.235	2.36	59.9	4300	6398
4/0 AWG	532	19x28	8	1	259	7x37	0.110	0.235	2.50	63.5	5059	7529
250 MCM	627	19x33	8	1/0	266	19x14	0.120	0.250	2.69	68.3	6200	9227
350 MCM	888	37x24	8	2/0	342	19x18	0.120	0.265	2.95	74.9	7700	11458
500 MCM	1221	37x33		4/0	532	19x28	0.120	0.280	3.31	84.1	10200	15178

5.1

POWER-GROUNDING CONDUCTOR SIZE	POWER CONDUCTOR RESISTANCE AT 20°C	GROUNDING CONDUCTOR RESISTANCE AT 20°C	GROUND CHECK RESISTANCE AT 20°C	INDUCTANCE PER UNIT LENGTH	OPERATING CAPACITANCE PR UNIT LENGTH	PERMISSIBLE SHORT-CIRCUIT CURRENT ² (1s)	AMPACITY ¹ 40°C AMBIENT TEMP.	MAXIMUM PERMISSIBLE TENSILE FORCE
AWG or MCM	Ω /1000Ft	Ω /1000Ft	Ω /1000Ft	mH/1000Ft	μF/1000Ft	kA	A	N
6 AWG – 10 AWG	0.436	1.109	0.679	0.132	0.08	1.90	93	600
4 AWG – 8 AWG	0.274	0.697	0.679	0.119	0.09	3.03	122	950
2 AWG – 6 AWG	0.172	0.436	0.679	0.112	0.10	4.80	159	1500
1 AWG – 5 AWG	0.137	0.349	0.679	0.108	0.11	6.06	184	1900
1/0 AWG – 4 AWG	0.109	0.274	0.679	0.105	0.12	7.65	211	2400
2/0 AWG – 3 AWG	0.0868	0.227	0.679	0.099	0.14	9.64	243	3000
3/0 AWG – 2 AWG	0.0688	0.172	0.679	0.098	0.14	12.15	279	3800
4/0 AWG – 1 AWG	0.0546	0.137	0.679	0.094	0.16	15.30	321	4800
250 MCM – 1/0 AWG	0.0466	0.109	0.436	0.089	0.18	18.16	355	5800
350 MCM – 2/0 AWG	0.0333	0.0868	0.436	0.085	0.21	25.31	435	7900
500 MCM – 4/0 AWG	0.0233	0.0546	0.436	0.082	0.24	36.18	536	11400

5.2 STANDARD PRINT LEGEND:

Paige Electric Type SHD-GC (SIZE) 5000V Shielded 90°C
(Cul) E# MSHA P7341D

1) Ampacity- Free air measured; Based on continuous duty at 90°C conductor temperature
(2) Short-circuit current (1s) – Based on conductor temperature from 90°C up to 250°C