

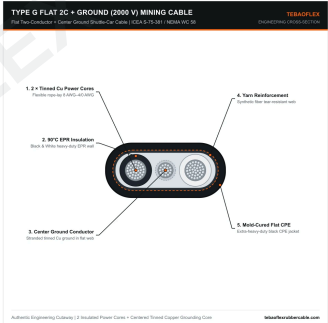
Type G Flat 2/C + Ground (600–2000 V) Shuttle-Car Mining Cable

Type G Flat 600–2,000 V portable mining cable is purpose-built for DC underground shuttle cars, roof bolters, face drills, and mobile reel-fed DC haulage machines that require a dedicated low-impedance metallic equipment grounding conductor separate from the DC negative return conductor. Positioning the stranded tinned copper ground conductor along the center web between the Black and White EPR power cores preserves ultra-compact flat spooling while meeting ICEA S-75-381 / MSHA grounding area rules.

1. CABLE CONSTRUCTION

1. Power Conductors (2×)	Two flexible rope-lay stranded annealed tinned copper power conductors (133/7×19 up to 532/19×28 strands, 8 AWG to 4/0 AWG) per ASTM B172 and ASTM B33.
2. 90°C EPR Power Insulation	Heat-, moisture-, and ozone-resistant Ethylene Propylene Rubber (EPR), color-coded Black and White: 0.060 in (1.52 mm) wall for 8–2 AWG; 0.080 in (2.03 mm) wall for 1–4/0 AWG.
3. Center Grounding Conductor (1×)	Flexible stranded annealed tinned copper grounding conductor (10 AWG to 1/0 AWG, sized ≥50% of one phase conductor per ICEA S-75-381) centered in the elastomeric web between the two power cores.
4. Synthetic Yarn Reinforcement	High-tenacity reinforcing fiber layer applied between the inner and outer jacket passes to lock core spacing and resist tear propagation under high reel pull.
5. Mold-Cured Flat CPE Jacket	Extra-heavy-duty black thermosetting Chlorinated Polyethylene (CPE) outer sheath (optional CSP, PCP/Neoprene, or high-visibility colored compounds available).

Cross-Section Reference



Type G Flat 2000V cutaway: Left (Black) and Right (White) 90°C EPR power cores flanking a centered stranded tinned copper equipment grounding conductor inside a reinforced flat CPE jacket.

2. ELECTRICAL & MECHANICAL CHARACTERISTICS

Rated Voltage	600 V to 2,000 V DC or single-phase AC mobile mining service
Configuration	Flat parallel 2 insulated power conductors (Black, White) + 1 centered grounding conductor
Grounding Conductor Sizing	10 AWG (on #8) through 1/0 AWG (on 4/0), ≥50% circular-mil cross-section of one power conductor
Maximum Conductor Temperature	+90°C continuous operation +250°C short-circuit rating
Minimum Bending Radius	6 × minor flat cable thickness (H) across shuttle-car sheaves and drums
Standards & Flame Reference	ICEA S-75-381 / NEMA WC 58; ASTM B172 & ASTM B33; CAN/CSA-C22.2 No. 96; MSHA flame-resistant reference

3. DIMENSIONAL, GROUNDING & AMPACITY SPECIFICATIONS

Table 1: Type G Flat 2-Conductor + Center Ground — 600–2000 V Reinforced Black CPE (8 AWG to 4/0 AWG)								
Power Cores	Area (mm²)	Power Strands	Center Ground (Strands)	EPR Wall (in / mm)	Nominal H × W (in)	Nominal H × W (mm)	Weight (lb/kft / kg/km)	Ampacity 40°C (A)
2 × 8 AWG	8.37	133 (7×19)	1 × 10 AWG (49)	0.060 / 1.52	0.51 × 0.92	13.0 × 23.4	390 / 580	72
2 × 6 AWG	13.30	133 (7×19)	1 × 8 AWG (133)	0.060 / 1.52	0.56 × 1.02	14.2 × 25.9	505 / 751	95
2 × 4 AWG	21.15	259 (7×37)	1 × 7 AWG (133)	0.060 / 1.52	0.61 × 1.15	15.5 × 29.2	665 / 990	127
2 × 2 AWG	33.62	259 (7×37)	1 × 5 AWG (133)	0.060 / 1.52	0.73 × 1.35	18.5 × 34.3	960 / 1,429	167
2 × 1 AWG	42.41	259 (7×37)	1 × 4 AWG (259)	0.080 / 2.03	0.81 × 1.55	20.6 × 39.4	1,215 / 1,808	191
2 × 1/0 AWG	53.49	259 (7×37)	1 × 3 AWG (259)	0.080 / 2.03	0.93 × 1.67	23.6 × 42.4	1,485 / 2,210	217
2 × 2/0 AWG	67.43	329 (7×47)	1 × 2 AWG (259)	0.080 / 2.03	0.99 × 1.85	25.1 × 47.0	1,815 / 2,701	250
2 × 3/0 AWG	85.01	418 (19×22)	1 × 1 AWG (259)	0.080 / 2.03	1.03 × 2.00	26.2 × 50.8	2,190 / 3,259	287
2 × 4/0 AWG	107.2	532 (19×28)	1 × 1/0 (266)	0.080 / 2.03	1.10 × 2.15	27.9 × 54.6	2,630 / 3,914	328

Grounding & Reel Guidance: Some regional mine specifications also request split triple-strand flat web grounds or green-yellow elastomeric covering over the central ground core; TEBAOFLEX manufactures both standard bare center-ground and custom web-ground geometries to match existing shuttle-car splice kits.