

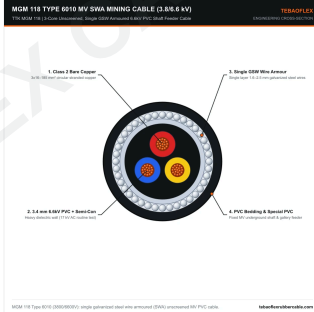
MGM 118 Type 6010 Single-Armoured Medium-Voltage Mining Cable (3800/6600V)

MGM 118 Type 6010 is a 3800/6600 V stationary medium-voltage mining power cable manufactured to Turkish TTK MGM 118, pairing Class 2 electrolytic copper conductors, 3.4 mm MV PVC insulation with semiconductive stress control, and single-layer galvanized steel wire armour (SWA) for underground trunk distribution.

1. CABLE CONSTRUCTION

1. Conductor	Electrolytic circular stranded bare copper wire per IEC 60228 Class 2 (4.90 mm to 17.00 mm nominal conductor diameter across 16–185 mm²).
2. MV Insulation & Semi-Con Layer	3.4 mm nominal medium-voltage PVC compound integrated with semiconductive stress-grading layer (without individual metallic copper core tape; see Type 6110 for copper-screened cores).
3. Inner Bedding	Extruded PVC-based inner sheath (1.4 mm to 2.6 mm radial wall; 30.0 mm to 56.9 mm diameter over bedding) creating a uniform cylindrical seat.
4. Single GSW Armour (SWA)	One concentric layer of heavy galvanized steel round wires (1.6 mm wire on 3x16; 2.0 mm wire on 3x25–70; 2.5 mm wire on 3x95–185 mm²).
5. Outer Sheath	Special flame-retardant mining-grade PVC outer sheath (2.0 mm to 2.8 mm radial wall) resistant to acid mine water, oils, and rock abrasion.

Cross-Section Anatomy



MGM 118 Type 6010 Cross-Section: Three Class 2 bare copper conductors, 3.4 mm medium-voltage PVC insulation + semiconductive stress-control layer, PVC inner bedding, single-layer GSW wire armour (SWA), and special PVC sheath.

2. ELECTRICAL, MECHANICAL & STANDARD DATA

Reference Standard	Turkish Hard Coal Enterprises TTK MGM 118 & IEC 60228 Class 2
Rated Voltage (Uo/U)	3800 / 6600 V (3.8/6.6 kV AC Medium-Voltage Systems)
Routine Dielectric Test	17,000 V (17 kV) AC
Cross-Section Range	3 x 16, 25, 35, 50, 70, 95, 120, 150, and 185 mm²
MV Insulation Thickness	3.4 mm nominal across all cross-sections
Continuous Current (25°C)	86 A (3x16 mm²) up to 370 A (3x185 mm²) at 25°C ambient
Minimum Bending Radius	10 x maximum overall cable diameter (379 mm to 713 mm)
Armour DC Resistance (20°C)	1.92 Ω/km (3x16 mm²) down to 0.165 Ω/km (3x185 mm²)

3. DIMENSIONAL, ARMOUR & ELECTRICAL SPECIFICATIONS

MGM 118 Type 6010 (3800/6600V) — Single GSW Armoured (SWA) Shaft & Gallery Feeder Schedule														
Cable Size	Cond. Dia. (mm)	MV PVC Wall (mm)	Inner Sheath (mm)	Inner Dia. (mm)	SWA Wire Dia. (mm)	Outer Sheath (mm)	Min. OD (mm)	Max. OD (mm)	Min. Bend (mm)	Current 25°C (A)	Cond. R (Ω/km)	Armour R (Ω/km)	Cu Wt. (kg/km)	Cable Wt. (kg/km)
3x16	4.90	3.4	1.4	30.0	1 x 1.6	2.0	33.9	37.9	379	86	1.15	1.92	461	2700
3x25	6.10	3.4	1.8	34.0	1 x 2.0	2.1	38.3	42.3	423	110	0.727	1.21	720	3600
3x35	7.10	3.4	1.8	36.5	1 x 2.0	2.2	40.6	44.6	446	135	0.524	0.873	1043	4200
3x50	8.40	3.4	1.8	37.9	1 x 2.0	2.2	43.4	47.4	474	160	0.387	0.645	1540	5100
3x70	10.00	3.4	1.8	40.7	1 x 2.0	2.3	47.1	51.1	511	200	0.268	0.447	2236	6450
3x95	11.80	3.4	2.2	44.7	1 x 2.5	2.5	53.1	57.1	571	245	0.193	0.322	3086	8450
3x120	13.30	3.4	2.2	48.6	1 x 2.5	2.6	56.6	60.6	606	285	0.153	0.255	3956	9900
3x150	15.20	3.4	2.2	52.7	1 x 2.5	2.6	60.6	64.6	646	325	0.124	0.207	4970	11600
3x185	17.00	3.4	2.6	56.9	1 x 2.5	2.8	67.3	71.3	713	370	0.0991	0.165	6208	14550

Engineering Audit Correction: Source catalog sheets that misprinted MGM 109 or two layers in boilerplate text have been corrected above to the authentic TTK MGM 118 Type 6010 single-layer GSW (SWA) build verified by the 1/1.6 - 1/2.5 mm wire schedule and cable weights.