

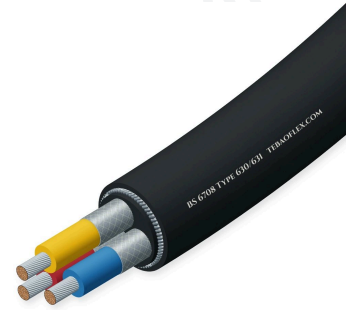


Mining trailing & reeling cables

BS 6708 Type 630 & Type 631 (3.8/6.6 kV)

BS 6708 Type 630 & 631 MV Armoured Cable (3.8/6.6 kV)

3,800/6,600 V screened EPR pliable steel wire armoured mining power cable (35–150 mm²)



BS 6708 Type 630 / Type 631

3,800/6,600 V · 35–150 mm²

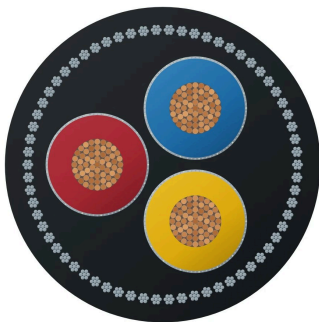
Screened + Pliable GSW Armour

Application

BS 6708 Type 630 (3 screened phase cores, 3×35–3×150 mm²) and Type 631 (3 screened phase cores + 1 unscreened EPR earth core, 3×50+35 & 3×70+50 mm²) 3.8/6.6 kV pliable wire armoured mining cables with PCP sheath.

Typical uses: Underground 6.6 kV mine roadway distribution, Longwall gate-end transformer feeders, Deep gassy & dusty coal mine trunks, Quarry primary crusher & shovel sub-feeders, Mobile substation interconnections, Armoured 3.8/6.6 kV pump & fan feeders

Construction



Cross-section, not to scale

1	Flexible phase conductors (3) + earth core (Type 631)	IEC 60228 Class 5
2	5.0 mm EPR medium-voltage insulation	BS 6708 (15 kV test)
3	Coloured textile identification tape	BS 6708
4	Composite copper / nylon braided phase screen	BS 6708
5	Rubber inner bedding sheath	BS 6708
6	Pliable galvanised steel wire armour	BS 6708
7	Heavy-duty chloroprene outer sheath	BS 6708

Technical data

Typical values

Rated voltage U₀/U	3,800/6,600 V (3.8/6.6 kV) AC · 15 kV routine AC test voltage	Current rating (25 °C)	135 to 320 A continuous at 25 °C ambient (Type 630) · 170 to 205 A (Type 631)
Screen & armour DC resistance	3 screens in parallel: 0.42–1.00 Ω/km at 20 °C · Pliable GSW armour: 0.39–0.76 Ω/km at 20 °C	Ambient temperature range	–25 °C to +85 °C
Max. conductor temperature	+90 °C continuous EPR operating temperature (250 °C short-circuit)	Min. bending radius	12 × Maximum Overall Diameter (894 to 1,247 mm across 35–150 mm ²)
Pliable wire armour & sheaths	3.8–5.0 mm rubber inner sheath + 7/0.90 mm or 7/1.25 mm pliable galvanised steel wire armour + 6.0–8.0 mm heavy-duty PCP outer sheath	Crush & impact protection	Pliable galvanised steel wire armour between thick elastomer sheaths withstands rockfall and roadway crush
Flame, oil & gassy mine environment	Heavy-duty chloroprene (PCP) outer sheath (6.0–8.0 mm wall) for deep mines with explosive gas and coal dust	Standards	BS 6708 (3.8/6.6 kV screened pliable-armoured mining cables — Type 630 & Type 631)

Sizes

8 standard constructions

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Designation BS 6708 Type	Phase mm ²	Phase strand n/mm	Phase Ø mm	EPR wall mm	Earth core mm ² (strand · Ø)	Inner wall mm	Inner min Ø mm	Inner max Ø mm	Armour n/mm	Outer wall mm	Min. OD mm	Max. OD mm	Min. bend mm	Cu mass kg/km	Mass ≈ kg/km
☐ Type 630 · 3 × 35 mm ²	35	276/0.40	8.40	5.0	—	3.8	53.1	56.1	7/0.90	6.0	70.5	74.5	894	1,010	8,400
☐ Type 630 · 3 × 50 mm ²	50	396/0.40	10.10	5.0	—	3.8	56.0	60.0	7/0.90	6.3	75.0	79.3	952	1,450	9,850
☐ Type 630 · 3 × 70 mm ²	70	360/0.50	11.90	5.0	—	5.0	63.0	67.0	7/1.25	6.8	80.6	84.9	1,019	2,020	12,050
☐ Type 630 · 3 × 95 mm ²	95	475/0.50	13.90	5.0	—	5.0	72.3	72.3	7/1.25	7.3	90.6	94.9	1,139	2,750	13,850
☐ Type 630 · 3 × 120 mm ²	120	608/0.50	15.50	5.0	—	5.0	75.5	75.5	7/1.25	7.6	94.4	98.7	1,185	3,460	19,200
☐ Type 630 · 3 × 150 mm ²	150	756/0.50	17.20	5.0	—	5.0	80.0	80.0	7/1.25	8.0	99.6	103.9	1,247	4,330	21,200
☐ Type 631 · 3 × 50 + 35E	50	396/0.40	10.10	5.0	1×35 (276/0.40 · 8.40 Ø)	5.0	65.4	69.2	7/0.90	6.9	86.7	91.0	1,092	2,100	12,100
☐ Type 631 · 3 × 70 + 50E	70	360/0.50	11.90	5.0	1×50 (396/0.40 · 10.10 Ø)	5.0	70.5	74.3	7/1.25	7.4	92.8	97.1	1,166	3,100	14,250

- All phase cores (and the unscreened earth core in Type 631) have 5.0 mm nominal radial EPR insulation wall thickness.
- Minimum bending radius is 12 × Maximum Overall Diameter across all Type 630 and Type 631 configurations.

Electrical parameters

8 sizes

Designation BS 6708 Type	Current rating A (25 °C)	Phase DC 20 °C Ω/km	Earth DC 20 °C Ω/km	Armour DC 20 °C Ω/km	3 screens par. Ω/km
Type 630 · 3 × 35 mm ²	135	0.565	—	0.76	1.00
Type 630 · 3 × 50 mm ²	170	0.393	—	0.71	0.88
Type 630 · 3 × 70 mm ²	205	0.277	—	0.46	0.72
Type 630 · 3 × 95 mm ²	250	0.210	—	0.43	0.78
Type 630 · 3 × 120 mm ²	295	0.164	—	0.41	0.62
Type 630 · 3 × 150 mm ²	320	0.132	—	0.39	0.67
Type 631 · 3 × 50 + 35E	170	0.393	0.565	0.45	0.45
Type 631 · 3 × 70 + 50E	205	0.277	0.393	0.42	0.42

– In Type 630, earth fault current is carried by the 3 phase core screens in parallel (0.62–1.00 Ω/km) plus the pliable steel wire armour (0.39–0.76 Ω/km). Type 631 adds a dedicated 35 or 50 mm² copper earth core.

Standards and approvals

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

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Typical values for this cable type, based on BS 6708 · IEC 60228 Class 5. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.