



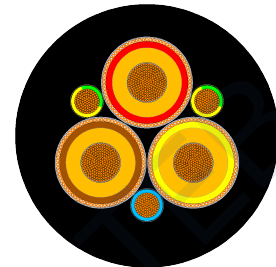
TEBAOFLEX CABLE

## DATA SHEET

Mining&Industrial cable

### BS 6708 TYPE 16 640/1100 V CABLE

Power supply cable for coalcutters and other machines



#### APPLICATION

Used for supplying excavating and crushing machines, coalcutters and other equipment in deep mines or surface environments where explosive gases and dust can accumulate.

#### CONSTRUCTION

| Parameter    | Value                                                                                                                                                                                                      |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Conductor    | Electrolytic stranded tinned copper wire, IEC 60228 Class 5                                                                                                                                                |
| Insulation   | EPR insulation                                                                                                                                                                                             |
| Separator    | Coloured textile tape for core identification                                                                                                                                                              |
| Screen       | Tinned copper and nylon braided screen over phase cores; pilot core and earth core are not screened                                                                                                        |
| Pilot core   | One unscreened pilot core laid up in the outer interstices with the earth cores                                                                                                                            |
| Earth cores  | Two unscreened earth cores laid up in the outer interstices                                                                                                                                                |
| Lay-up       | Three phase cores with composite individual screens, one unscreened pilot core and two unscreened earth cores in the outer interstices laid up around an elastomeric cradle and in contact with each other |
| Bedding      | Rubber based bedding compound                                                                                                                                                                              |
| Outer sheath | Heavy duty chloroprene outer sheath                                                                                                                                                                        |

#### CABLE CHARACTERISTICS

| Parameter     | Value                                                                                                                                      |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Standard      | BS 6708                                                                                                                                    |
| Rated voltage | 640/1100 V                                                                                                                                 |
| Test voltage  | 3 kV; 1.5 kV for pilot and earth cores                                                                                                     |
| Cable type    | Composite individually screened phase cores with unscreened pilot core and two unscreened earth cores laid up around an elastomeric cradle |

## TECHNICAL DATA

Complete nominal dimensional data. Source ordering codes have been omitted.

| CORE DIMENSIONS       |                 |                    |               |                  |                                |                 |                 |
|-----------------------|-----------------|--------------------|---------------|------------------|--------------------------------|-----------------|-----------------|
| Nominal cross section | Phase conductor | Phase stranding mm | Cond. dia. mm | Insul. thick. mm | Total screen cross section mm2 | Earth conductor | Pilot conductor |
| 3x25+3x10             | 3x25            | 196/0.40           | 6.75          | 1.6              | 25.4                           | 2x10            | 1x10            |
| 3x35+3x10             | 3x35            | 276/0.40           | 8.00          | 1.6              | 25.4                           | 2x10            | 1x10            |
| 3x50+3x16             | 3x50            | 396/0.40           | 9.75          | 1.7              | 33                             | 2x16            | 1x16            |
| 3x70+3x25             | 3x70            | 360/0.50           | 11.60         | 1.8              | 35                             | 2x25            | 1x25            |
| 3x95+3x35             | 3x95            | 475/0.50           | 12.75         | 2.0              | 53                             | 2x35            | 1x35            |

| PILOT CORE DETAILS    |                 |                    |                     |                        |                  |
|-----------------------|-----------------|--------------------|---------------------|------------------------|------------------|
| Nominal cross section | Pilot conductor | Pilot stranding mm | Pilot cond. dia. mm | Pilot insul. thick. mm | Earth conductors |
| 3x25+3x10             | 1x10            | 80/0.40            | 4.40                | 1.0                    | 2x10             |
| 3x35+3x10             | 1x10            | 80/0.40            | 4.40                | 1.0                    | 2x10             |
| 3x50+3x16             | 1x16            | 126/0.40           | 5.50                | 1.0                    | 2x16             |
| 3x70+3x25             | 1x25            | 196/0.40           | 6.75                | 1.0                    | 2x25             |
| 3x95+3x35             | 1x35            | 276/0.40           | 8.00                | 1.0                    | 2x35             |

| CABLE DETAILS         |            |            |                     |                               |                         |                      |                     |
|-----------------------|------------|------------|---------------------|-------------------------------|-------------------------|----------------------|---------------------|
| Nominal cross section | Min. OD mm | Max. OD mm | Min. bend radius mm | Outer sheath radial thick. mm | Max pulling tension kgf | Approx. weight kg/km | Copper weight kg/km |
| 3x25+3x10             | 36.5       | 39.2       | 353                 | 5.0                           | 533                     | 2770                 | 1298                |
| 3x35+3x10             | 39.5       | 42.7       | 385                 | 5.0                           | 580                     | 3250                 | 1666                |
| 3x50+3x16             | 43.9       | 47.0       | 423                 | 5.0                           | 649                     | 4200                 | 2321                |
| 3x70+3x25             | 49.6       | 53.3       | 480                 | 5.4                           | 795                     | 5650                 | 3276                |
| 3x95+3x35             | 56.2       | 63.0       | 567                 | 6.0                           | 1002                    | 7350                 | 4374                |

TECHNICAL DATA

Complete nominal dimensional data. Source ordering codes have been omitted.

| CURRENT RATINGS       |                                         |                                 |
|-----------------------|-----------------------------------------|---------------------------------|
| Nominal cross section | Continuous current rating at 25 deg C A | Short circuit current for 1 s A |
| 3x25+3x10             | 110                                     | 3450                            |
| 3x35+3x10             | 135                                     | 3450                            |
| 3x50+3x16             | 170                                     | 4550                            |
| 3x70+3x25             | 205                                     | 4820                            |
| 3x95+3x35             | 250                                     | 7300                            |

| ELECTRICAL DETAILS    |                                            |                                                  |                                         |
|-----------------------|--------------------------------------------|--------------------------------------------------|-----------------------------------------|
| Nominal cross section | Phase conductor DC res. at 20 deg C ohm/km | Pilot and earth cores DC res. at 20 deg C ohm/km | 3 screens in parallel connection ohm/km |
| 3x25+3x10             | 0.795                                      | 1.950                                            | 1.10                                    |
| 3x35+3x10             | 0.565                                      | 1.950                                            | 1.20                                    |
| 3x50+3x16             | 0.393                                      | 1.240                                            | 1.40                                    |
| 3x70+3x25             | 0.277                                      | 0.795                                            | 0.70                                    |
| 3x95+3x35             | 0.210                                      | 0.565                                            | 0.85                                    |

NOTES

Nominal values are for cable selection. Actual cable dimensions may vary due to manufacturing tolerances.

CERTIFICATIONS

