



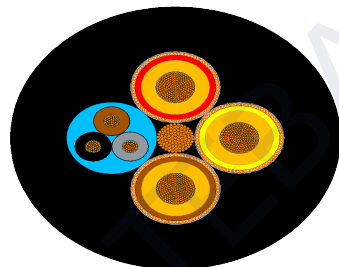
TEBAOFLEX CABLE

## DATA SHEET

Mining&Industrial cable

### BS 6708 TYPE 7S 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; ground core is not insulated                                                                                          |
| Separator    | Coloured textile tape for core identification                                                                                         |
| Screen       | Tinned copper and nylon braided screen over phase cores; pilot unit is not screened                                                   |
| Pilot unit   | One unscreened pilot unit with three thinner cores                                                                                    |
| Lay-up       | Three phase cores with composite individual screens and one pilot unit laid up in contact with the bare earth conductor in the centre |
| 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; 2.5 kV for pilot cores                                                                                       |
| Cable type    | Composite individually screened phase cores with unscreened three-core pilot unit and central bare earth conductor |

## 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. dia. mm | Screen dia. mm | Earth conductor | Pilot conductor |
| 3x50+25+3x4           | 3x50            | 396/0.40           | 9.75          | 13.60          | 15.90          | 1x25            | 3x4             |
| 3x70+35+3x6           | 3x70            | 360/0.50           | 11.60         | 15.70          | 18.00          | 1x35            | 3x6             |
| 3x95+50+3x6           | 3x95            | 475/0.50           | 12.75         | 17.25          | 19.55          | 1x50            | 3x6             |
| 3x120+50+3x10         | 3x120           | 608/0.50           | 15.10         | 20.05          | 22.35          | 1x50            | 3x10            |
| 3x150+70+3x10         | 3x150           | 740/0.50           | 17.00         | 22.20          | 24.50          | 1x70            | 3x10            |

| PILOT UNIT DETAILS    |                  |                    |                     |                      |                    |
|-----------------------|------------------|--------------------|---------------------|----------------------|--------------------|
| Nominal cross section | Pilot conductors | Pilot stranding mm | Pilot cond. dia. mm | Pilot insul. dia. mm | Pilot unit dia. mm |
| 3x50+25+3x4           | 3x4              | 56/0.30            | 2.60                | 5.55                 | 15.60              |
| 3x70+35+3x6           | 3x6              | 84/0.30            | 3.50                | 6.40                 | 17.70              |
| 3x95+50+3x6           | 3x6              | 84/0.30            | 3.50                | 6.40                 | 19.25              |
| 3x120+50+3x10         | 3x10             | 80/0.40            | 4.40                | 7.30                 | 22.05              |
| 3x150+70+3x10         | 3x10             | 80/0.40            | 4.40                | 7.30                 | 24.20              |

| CABLE DETAILS         |            |            |                     |                         |                      |                     |
|-----------------------|------------|------------|---------------------|-------------------------|----------------------|---------------------|
| Nominal cross section | Min. OD mm | Max. OD mm | Min. bend radius mm | Max pulling tension kgf | Approx. weight kg/km | Copper weight kg/km |
| 3x50+25+3x4           | 48.5       | 51.8       | 420                 | 1120                    | 4450                 | 2200                |
| 3x70+35+3x6           | 55.1       | 58.8       | 470                 | 1570                    | 6080                 | 3150                |
| 3x95+50+3x6           | 62.4       | 66.1       | 530                 | 2000                    | 6650                 | 4250                |
| 3x120+50+3x10         | 68.0       | 72.5       | 580                 | 2000                    | 8300                 | 4800                |
| 3x150+70+3x10         | 70.4       | 78.4       | 630                 | 2000                    | 10500                | 5300                |

## 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 | Intermittent current rating at 25 deg C A |
| 3x50+25+3x4           | 170                                     | 200                                       |
| 3x70+35+3x6           | 205                                     | 250                                       |
| 3x95+50+3x6           | 250                                     | 310                                       |
| 3x120+50+3x10         | 295                                     | 355                                       |
| 3x150+70+3x10         | 320                                     | 385                                       |

| ELECTRICAL DETAILS    |                               |                               |                           |                        |                        |                          |                     |
|-----------------------|-------------------------------|-------------------------------|---------------------------|------------------------|------------------------|--------------------------|---------------------|
| Nominal cross section | Phase DC res. 20 deg C ohm/km | Pilot DC res. 20 deg C ohm/km | Screens+earth res. ohm/km | Reactance 50 Hz ohm/km | Reactance 60 Hz ohm/km | Min. insul. res. Mohm/km | Voltage drop mV/A/m |
| 3x50+25+3x4           | 0.393                         | 5.47                          | 0.44                      | 0.098                  | 0.118                  | 285                      | 0.84                |
| 3x70+35+3x6           | 0.277                         | 3.60                          | 0.30                      | 0.095                  | 0.114                  | 260                      | 0.61                |
| 3x95+50+3x6           | 0.210                         | 3.60                          | 0.26                      | 0.094                  | 0.113                  | 250                      | 0.47                |
| 3x120+50+3x10         | 0.164                         | 2.09                          | 0.24                      | 0.092                  | 0.110                  | 250                      | 0.38                |
| 3x150+70+3x10         | 0.132                         | 2.09                          | 0.176                     | 0.080                  | 0.096                  | 250                      | 0.32                |

### NOTES

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

### CERTIFICATIONS



TEBAOFLEX CABLE