



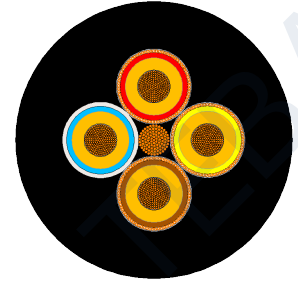
TEBAOFLEX CABLE

## DATA SHEET

Mining&Industrial cable

### BS 6708 TYPE 307 1900/3300 V CABLE

Power supply cable for coalcutters and other machines



#### APPLICATION

Used for supplying excavating, crushing machines and equipment.

#### ENVIRONMENT

For use in deep mines where explosive gases and dust can accumulate, and on the surface.

#### CONSTRUCTION

| Parameter    | Value                                                                               |
|--------------|-------------------------------------------------------------------------------------|
| Conductor    | Electrolytic, stranded, tinned copper wire, IEC 60228 Class 5                       |
| Insulation   | EPR; the earth conductor is not insulated                                           |
| Separator    | Colored textile tape for core identification                                        |
| Screen       | Tinned copper and nylon braided screen over phase cores; pilot core is not screened |
| Lay-up       | All cores laid up in contact with the bare copper earth conductor                   |
| Bedding      | Rubber based bedding compound                                                       |
| Outer sheath | Heavy duty chloroprene outer sheath                                                 |

#### CABLE CHARACTERISTICS

| Parameter        | Value                                                                                   |
|------------------|-----------------------------------------------------------------------------------------|
| Standard         | BS 6708                                                                                 |
| Rated voltage    | 1900/3300 V                                                                             |
| Test voltage     | 7.5 kV                                                                                  |
| Core arrangement | Three screened phase cores, one unscreened pilot core and a bare copper earth conductor |

# TECHNICAL DATA

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

| CABLE DIMENSIONS                     |                |                |                |                |                |                 |                 |
|--------------------------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|
| Parameter                            | 3x25<br>+25+16 | 3x35<br>+25+16 | 3x50<br>+35+25 | 3x70<br>+50+35 | 3x95<br>+50+50 | 3x120<br>+70+70 | 3x150<br>+70+95 |
| Phase conductor cross section mm2    | 3x25           | 3x35           | 3x50           | 3x70           | 3x95           | 3x120           | 3x150           |
| Phase conductor stranding            | 196/0.40       | 276/0.40       | 396/0.40       | 360/0.50       | 475/0.50       | 608/0.50        | 756/0.50        |
| Phase conductor diameter nominal mm  | 7.00           | 8.50           | 10.00          | 11.70          | 13.50          | 15.40           | 17.20           |
| Phase insulation diameter nominal mm | 13.10          | 14.70          | 15.70          | 17.70          | 19.10          | 21.40           | 23.00           |
| Phase screen diameter mm             | 15.50          | 17.10          | 17.70          | 19.70          | 21.10          | 23.40           | 25.00           |
| Earth conductor cross section mm2    | 1x25           | 1x25           | 1x35           | 1x50           | 1x50           | 1x70            | 1x95            |
| Earth conductor stranding            | 196/0.40       | 196/0.40       | 276/0.40       | 396/0.40       | 396/0.40       | 360/0.50        | 475/0.50        |
| Earth conductor diameter nominal mm  | 7.00           | 7.00           | 8.50           | 10.00          | 10.00          | 11.70           | 13.50           |
| Pilot conductor cross section mm2    | 1x16           | 1x16           | 1x25           | 1x35           | 1x50           | 1x70            | 1x95            |
| Pilot conductor stranding            | 126/0.40       | 126/0.40       | 196/0.40       | 276/0.40       | 396/0.40       | 360/0.50        | 475/0.50        |
| Pilot conductor diameter nominal mm  | 5.50           | 5.50           | 7.00           | 8.50           | 10.00          | 11.70           | 13.50           |
| Pilot insulation diameter nominal mm | 11.60          | 11.60          | 13.10          | 14.70          | 15.70          | 17.70           | 19.10           |
| Minimum overall diameter mm          | 47.4           | 51.6           | 56.8           | 62.8           | 68.9           | 73.4            | 75.9            |
| Maximum overall diameter mm          | 49.9           | 54.6           | 59.8           | 65.8           | 72.7           | 77.2            | 79.7            |
| Minimum bending radius mm            | 400            | 440            | 480            | 525            | 580            | 615             | 640             |
| Maximum pulling tension kgf          | 640            | 830            | 1200           | 1680           | 2000           | 2000            | 2000            |
| Approximate cable weight kg/km       | 4000           | 4800           | 6150           | 7600           | 9250           | 11200           | 13000           |
| Copper weight kg/km                  | 1654           | 1948           | 2666           | 3482           | 4346           | 5450            | 6000            |

TECHNICAL DATA

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

| ELECTRICAL DETAILS                                       |                |                |                |                |                |                 |                 |
|----------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|
| Parameter                                                | 3x25<br>+25+16 | 3x35<br>+25+16 | 3x50<br>+35+25 | 3x70<br>+50+35 | 3x95<br>+50+50 | 3x120<br>+70+70 | 3x150<br>+70+95 |
| Continuous current rating at 25 deg C ambient A          | 110            | 135            | 170            | 205            | 250            | 295             | 320             |
| Intermittent current rating at 25 deg C ambient A        | 130            | 155            | 210            | 255            | 315            | 360             | 385             |
| Phase conductor DC resistance at 20 deg C ohm/km         | 0.795          | 0.565          | 0.393          | 0.277          | 0.210          | 0.164           | 0.132           |
| Pilot conductor DC resistance at 20 deg C ohm/km         | 1.240          | 1.240          | 0.795          | 0.565          | 0.393          | 0.277           | 0.210           |
| Three screens and earth in parallel DC resistance ohm/km | 0.50           | 0.50           | 0.35           | 0.35           | 0.28           | 0.28            | 0.14            |
| Nominal reactance at 50 Hz ohm/km                        | 0.125          | 0.117          | 0.113          | 0.108          | 0.105          | 0.101           | 0.098           |
| Nominal reactance at 60 Hz ohm/km                        | 0.150          | 0.141          | 0.136          | 0.129          | 0.126          | 0.121           | 0.118           |
| Minimum insulation resistance at 20 deg C MOhm/km        | 1250           | 1100           | 950            | 820            | 720            | 660             | 600             |
| 3 phase voltage drop at full load mV/A/m                 | 1.69           | 1.21           | 0.85           | 0.61           | 0.48           | 0.39            | 0.32            |

NOTES

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

CERTIFICATIONS

