



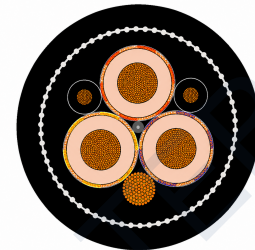
TEBAOFLEX CABLE

## DATA SHEET

Mining&Industrial cable

# SANS TYPE 611 / 611-ECC 6.35/11 KV CABLE

Medium voltage screened reeling and section feeder cable



### APPLICATION

Designed for electrically driven machines, movable electric apparatus in hazardous areas, portable electric apparatus and section feeders. Suitable for open-cast mining, medium sized draglines, shovels and drills, reeling purposes and other industrial applications.

### CONSTRUCTION

| Parameter           | Value                                                                                                                 |
|---------------------|-----------------------------------------------------------------------------------------------------------------------|
| Conductor           | Class 5 flexible stranded tinned annealed copper                                                                      |
| Insulation          | EPR thermosetting compound with strippable semi-conducting core screen, triple extruded                               |
| Braid               | Nylon / tinned copper wires                                                                                           |
| Pilot cores         | Insulated with EPM                                                                                                    |
| Lay                 | Each power core individually screened with tinned copper / textile braid and laid up with three insulated pilot cores |
| ECC variant         | One pilot core replaced with tinned conductor                                                                         |
| Inner sheath        | CR polychloroprene rubber                                                                                             |
| Reinforcement braid | Open nylon braid, minimum 16 strings                                                                                  |
| Outer sheath        | CR polychloroprene rubber, black                                                                                      |

### CABLE CHARACTERISTICS

| Parameter              | Value                                              |
|------------------------|----------------------------------------------------|
| Standard               | SANS 1520-2; SANS 1411-1; SANS 1411-3              |
| Rated voltage          | 6.35/11 kV                                         |
| Temperature rating     | -25 deg C to +90 deg C                             |
| Minimum bending radius | 9 x overall diameter                               |
| Performance            | UV resistant, sunlight resistant and oil resistant |
| Sheath colour          | Black                                              |

## TECHNICAL DATA

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

| TYPE 611 DIMENSIONS |                    |                     |                     |                       |                |                    |                     |                |                 |              |
|---------------------|--------------------|---------------------|---------------------|-----------------------|----------------|--------------------|---------------------|----------------|-----------------|--------------|
| Cond. size mm2      | Power wire dia. mm | Power cond. dia. mm | Screen wire dia. mm | Screen cross-sec. mm2 | Pilot size mm2 | Pilot wire dia. mm | Pilot cond. dia. mm | Max tension kN | Overall dia. mm | Weight kg/km |
| 25                  | 0.41               | 6.8                 | 0.31                | 29                    | 10             | 0.41               | 4.2                 | 1.1            | 50.7            | 410          |
| 35                  | 0.41               | 8.5                 | 0.31                | 31                    | 10             | 0.41               | 4.2                 | 1.6            | 52.2            | 450          |
| 50                  | 0.41               | 10.3                | 0.31                | 34                    | 10             | 0.41               | 4.2                 | 2.3            | 59.4            | 530          |
| 70                  | 0.51               | 11.9                | 0.31                | 37                    | 16             | 0.41               | 5.3                 | 3.2            | 60.4            | 650          |
| 95                  | 0.51               | 13.5                | 0.31                | 41                    | 16             | 0.41               | 5.3                 | 4.3            | 65.2            | 800          |
| 120                 | 0.51               | 15.5                | 0.31                | 43                    | 16             | 0.41               | 5.3                 | 5.4            | 71.3            | 980          |
| 150                 | 0.51               | 17.3                | 0.31                | 46                    | 25             | 0.41               | 6.8                 | 6.8            | 75.0            | 1070         |
| 185                 | 0.51               | 20.2                | 0.31                | 49                    | 25             | 0.41               | 6.8                 | 8.3            | 85.1            | 1340         |
| 240                 | 0.51               | 22.9                | 0.31                | 52                    | 25             | 0.41               | 6.8                 | 10.8           | 85.6            | 1470         |

| TYPE 611-ECC DIMENSIONS |              |                       |                      |
|-------------------------|--------------|-----------------------|----------------------|
| Conductor size mm2      | ECC size mm2 | ECC max. wire dia. mm | Nominal weight kg/km |
| 25                      | 16           | 0.41                  | 420                  |
| 35                      | 25           | 0.41                  | 460                  |
| 50                      | 25           | 0.41                  | 540                  |
| 70                      | 35           | 0.41                  | 670                  |
| 95                      | 50           | 0.41                  | 820                  |
| 120                     | 70           | 0.51                  | 1020                 |
| 150                     | 95           | 0.51                  | 1090                 |
| 185                     | 95           | 0.51                  | 1390                 |
| 240                     | 120          | 0.51                  | 1500                 |

### NOTES

Nominal dimensions and weights are provided for cable selection. Actual cable dimensions may vary due to manufacturing tolerances.

TECHNICAL DATA

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

| ELECTRICAL CHARACTERISTICS |                        |                        |              |                       |                       |                    |                    |                 |                  |               |
|----------------------------|------------------------|------------------------|--------------|-----------------------|-----------------------|--------------------|--------------------|-----------------|------------------|---------------|
| Cond. size mm2             | DC res. 20 deg C oh/km | DC res. 90 deg C oh/km | React. oh/km | Imped. 90 deg C oh/km | Min screen res. oh/km | Min ECC res. oh/km | Current 30 deg C A | Cond. S/C kA 1s | Screen S/C kA 1s | ECC S/C kA 1s |
| 25                         | 0.795                  | 1.05                   | 0.134        | 1.06                  | 1.6                   | 0.7                | 105                | 3.1             | 1.6              | 3.6           |
| 35                         | 0.565                  | 0.749                  | 0.124        | 0.759                 | 1.2                   | 0.5                | 130                | 4.3             | 2.1              | 5.0           |
| 50                         | 0.393                  | 0.521                  | 0.117        | 0.534                 | 0.8                   | 0.5                | 160                | 6.1             | 3.1              | 5.0           |
| 70                         | 0.277                  | 0.368                  | 0.113        | 0.385                 | 0.7                   | 0.4                | 195                | 8.5             | 3.5              | 7.5           |
| 95                         | 0.210                  | 0.279                  | 0.108        | 0.299                 | 0.6                   | 0.3                | 230                | 11.6            | 4.1              | 9.0           |
| 120                        | 0.164                  | 0.218                  | 0.103        | 0.241                 | 0.6                   | 0.23               | 260                | 14.6            | 4.1              | 11.5          |
| 150                        | 0.132                  | 0.176                  | 0.098        | 0.201                 | 0.6                   | 0.18               | 300                | 18.3            | 4.1              | 14.0          |
| 185                        | 0.108                  | 0.145                  | 0.096        | 0.174                 | 0.6                   | 0.18               | 340                | 22.57           | 4.1              | 14.0          |
| 240                        | 0.0817                 | 0.110                  | 0.092        | 0.143                 | 0.6                   | 0.15               | 400                | 29.3            | 4.1              | 17.0          |

| SERVICE CONDITIONS   |                                    |
|----------------------|------------------------------------|
| Parameter            | Value                              |
| Voltage rating       | 6.35/11 kV                         |
| Ambient rating basis | Current rating at 30 deg C ambient |
| Short circuit rating | Values shown are kA for 1 second   |

CERTIFICATIONS

