



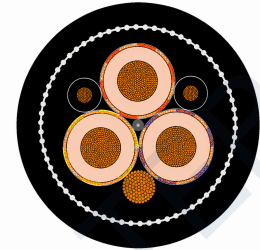
TEBAOFLEX CABLE

## 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

