

WELDING CABLES

CABLE CONSTRUCTION

- Conductor : 100% Bunched Copper Conductor Class-6 As Per IS:8130
- Insulation : Double Insulated/single insulated flexible NBR HOFR insulated as per IS:6380-1984
- Colour : Orange & Black.
- Nominal Voltage : 600 V
- Test Voltage : 3000 V AC
- IS 9857 : 1990
- Bending Radius : Fixed installation 6 x Overall Diameter



TECHNICAL DATA

| Cross Sectional Area (Sq.mm) | Max. Conductor Resistance at 20°C (ohm/km) | Nominal Thickness Of sheath (mm) | Minimum Overall Diameter (mm) | Minimum Overall Diameter (mm) | Welding Application/ Maximum Duty Cycle (Current Rating) | | | | |
|------------------------------|--|----------------------------------|-------------------------------|-------------------------------|--|-----------|-----------|-----------|-----------|
| | | | | | 100% (amp) | 85% (amp) | 60% (amp) | 30% (amp) | 20% (amp) |
| 10 | 1.91 | 2.0 | 7.8 | 10.0 | 105 | 115 | 135 | 190 | 235 |
| 16 | 1.21 | 2.0 | 9.0 | 11.5 | 135 | 145 | 175 | 245 | 302 |
| 25 | 0.78 | 2.0 | 10.0 | 13.0 | 180 | 195 | 230 | 330 | 402 |
| 35 | 0.554 | 2.0 | 11.5 | 14.5 | 225 | 245 | 290 | 410 | 503 |
| 50 | 0.386 | 2.2 | 13.0 | 17.0 | 285 | 310 | 370 | 520 | 637 |
| 70 | 0.272 | 2.4 | 15.0 | 19.0 | 355 | 385 | 460 | 650 | 794 |
| 95 | 0.206 | 2.6 | 17.5 | 21.5 | 430 | 470 | 560 | 790 | 961 |
| 120 | 0.161 | 2.8 | 19.5 | 24.0 | 500 | 540 | 650 | 910 | 1118 |

De-rating Factor:

- De-rating factor at various ambient temperature

| Air Temperature (°C) | 25 | 30 | 35 | 40 | 45 | 50 |
|----------------------|------|----|------|------|------|------|
| Derating Factor | 1.04 | 1 | 0.96 | 0.91 | 0.87 | 0.82 |

Current Rating:

- The maximum current ratings of flexible welding cables for different duly cycles are based on an ambient air temperature of 25 C and a maximum conductor temperature of 90 C. The percentage duly cycles for various processes and applications are as follows:
- Semi Automatic Welding : 30% to 85%
- Manual Welding : 0% to 60%
- Very intermittent or Occasional Welding : up to 20%

Voltage Drop:

- When total cable lengths in excess of 15 mtrs., are involved , it may be necessary to use cables of larger cross section to ensure that the voltage drop is not excessive and welding currents are maintained at adequate levels.