

Table 1 : Technology requirements of copper core ABC insulated cable

| Nominal cross section area of conductor(mm ²) | Single wire Min. No of conductor | Conductor O.D.(reference value)/mm | Nominal thickness of insulation(mm) | |
|---|----------------------------------|--|-------------------------------------|------------------------------|
| 10 | 6 | 3.8 | 1 | |
| 16 | 6 | 4.8 | 1.2 | |
| 25 | 6 | 6 | 1.2 | |
| 35 | 6 | 7 | 1.4 | |
| 50 | 6 | 8.4 | 1.4 | |
| 70 | 12 | 10 | 1.4 | |
| 95 | 15 | 11.6 | 1.6 | |
| 120 | 18 | 13 | 1.6 | |
| 150 | 18 | 14.6 | 1.8 | |
| 185 | 30 | 16.2 | 2 | |
| 240 | 34 | 18.4 | 2.2 | |
| The Max. Resistance of conductor at 20°C(Ω/km) | | The Min, resistance of insulation at rated temperature | | Breaking load of single core |
| Hard copper | Soft copper | 70°C | 90°C | Hard copper |
| 1.906 | 1.83 | 0.0067 | 0.67 | 3471 |
| 1.198 | 1.15 | 0.0065 | 0.65 | 5486 |
| 0.749 | 0.727 | 0.0054 | 0.54 | 8465 |
| 0.54 | 0.524 | 0.0054 | 0.54 | 11731 |
| 0.399 | 0.387 | 0.0046 | 0.46 | 16502 |
| 0.276 | 0.268 | 0.004 | 0.4 | 23461 |
| 0.199 | 0.193 | 0.0039 | 0.39 | 31759 |
| 0.158 | 0.153 | 0.0035 | 0.35 | 39911 |
| 0.128 | 0.124 | 0.0035 | 0.35 | 49505 |
| 0.1021 | 0.0991 | 0.0035 | 0.35 | 61846 |
| 0.0777 | 0.0754 | 0.0034 | 0.34 | 79823 |

Table 2: Technology requirements of aluminum core,aluminum alloy core ABC insulated cable

| No.section area of conductor (mm ²) | Single wire Min. No Of conductor | Conductor O.D. (reference value)/mm | Cable Max. Average outer diameter(mm) |
|---|----------------------------------|-------------------------------------|---------------------------------------|
| 10 | 6 | 3.8 | 6.5 |
| 16 | 6 | 4.8 | 8 |
| 25 | 6 | 6 | 9.4 |
| 35 | 6 | 7 | 11 |
| 50 | 6 | 8.4 | 12.3 |
| 70 | 12 | 10 | 14.1 |
| 95 | 15 | 11.6 | 16.5 |
| 120 | 15 | 13 | 18.1 |
| 150 | 15 | 14.6 | 20.2 |
| 185 | 30 | 16.2 | 22.5 |
| 240 | 30 | 18.4 | 25.6 |
| 300 | 30 | 20.8 | 27.2 |
| 400 | 53 | 23.2 | 30.7 |

| The Max. Resistance of conductor at 20°C(Ω/km) | | The Min. resistance of insulation at rated temperature | | Breaking load of single core | |
|--|----------------|--|------|------------------------------|----------------|
| Alumiumm | Aluminum alloy | 70°C | 90°C | Alumiumm | Aluminum alloy |
| 3.08 | 3.574 | 0.0067 | 0.67 | 1650 | 2514 |
| 1.91 | 2.217 | 0.0065 | 0.65 | 2517 | 4022 |
| 1.2 | 1.393 | 0.0054 | 0.54 | 3762 | 6284 |
| 0.868 | 1.007 | 0.0054 | 0.54 | 5177 | 8800 |
| 0.641 | 0.744 | 0.0046 | 0.46 | 7011 | 12569 |
| 0.443 | 0.514 | 0.004 | 0.4 | 10354 | 17596 |
| 0.32 | 0.371 | 0.0039 | 0.39 | 13727 | 23880 |
| 0.253 | 0.294 | 0.0035 | 0.35 | 17339 | 30164 |
| 0.206 | 0.239 | 0.0035 | 0.35 | 21033 | 37706 |
| 0.164 | 0.19 | 0.0035 | 0.35 | 26732 | 46503 |
| 0.125 | 0.145 | 0.0034 | 0.34 | 34679 | 60329 |
| 0.1 | 0.116 | 0.0033 | 0.33 | 43349 | 75411 |
| 0.0778 | 0.0904 | 0.0032 | 0.32 | 55707 | 100548 |