# 2.1. LSHF - Copper

**Smoke Emission Test: (IEC 61034, BS EN 61034)**

Smoke evolution is another critical performance indicator which needs to be evaluated on a laboratory scale and there are a number of methods used, based either on gravimetric or optical techniques.

IEC 61034 and BS EN 61034 Standards specify a test for determination of smoke density. The 3 meter cube test measures the generation of smoke from electric cables during fire. The higher the light transmittance, the less smoke emitted during a fire.

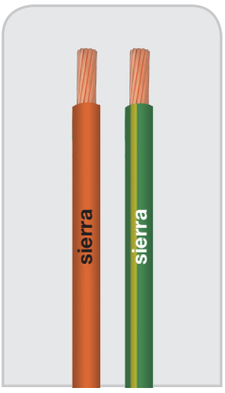
**Limiting Oxygen Index (LOI): (BS EN ISO 4589)**

Oxygen index is perhaps the most widely used indicator of a material's flammability. It is the minimum percentage of oxygen in an oxygen/nitrogen mixture required to support combustion of a given material at room temperature.

BS EN ISO 4589 Standard Specifies methods for the determination the minimum concentration of oxygen, in a mixture with nitrogen, which will support combustion of small vertical test specimens.

Flame retardant materials require a level of oxygen higher than that normally present in the atmosphere (21%) for burning to be maintained and a material having an oxygen index of 26 or above is considered to be self extinguishing. In general, the oxygen index of flame retardant PVC jacketed cables ranges from 28% to 32%,

## 2.1.1
## Single Core Thermosetting Insulated, Non-Sheathed Cable - Rigid Conductor



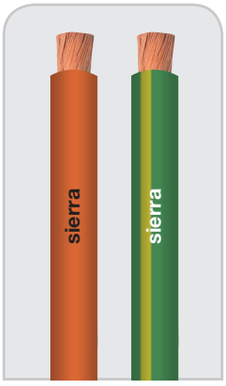

**Specifications**

| | | |
|---|---|---|
| **Type** | | : Cu/LSHF |
| **Standard** | | : BS 7211/ EN 50525-3-41 |
| **Nominal Voltage** | | : 450/750V |
| **Conductor** | | : Class 1 or Class 2 Annealed Copper Wires |
| **Insulation** | Material | : LSHF material - EI 5 |
| | Colour | : Green/Yellow, Blue or other colour |

| Nominal Cross Sectional Area | No. & Dia. Of wires | Nominal Insulation Thickness | Mean Overall Diameter | | Minimum Insulation Resistance at 90 °C | Max. d.c. Resistance at 20 °C | Approx. Weight |
|---|---|---|---|---|---|---|---|
| | | | Lower limit | Upper limit | | | |
| mm² | x/mm | mm | mm | mm | MΩ.km | Ω/km | kg/km |
| Copper Solid Conductor | | | | | | | |
| 1.5 | 1/1.38 | 0.7 | 2.6 | 3.3 | 0.011 | 12.1 | 20 |
| 2.5 | 1/1.78 | 0.8 | 3.2 | 4 | 0.010 | 7.41 | 32 |
| Copper Stranded Conductors | | | | | | | |
| 1.5 | 7/0.53 | 0.7 | 2.7 | 3.4 | 0.010 | 12.1 | 21 |
| 2.5 | 7/0.67 | 0.8 | 3.3 | 4.1 | 0.009 | 7.41 | 33 |
| 4 | 7/0.85 | 0.8 | 3.8 | 4.7 | 0.0077 | 4.61 | 49 |
| 6 | 7/1.04 | 0.8 | 4.3 | 5.4 | 0.0065 | 3.08 | 69 |
| 10 | 7/1.35 | 1.0 | 5.6 | 7.0 | 0.0065 | 1.83 | 115 |
| 16 | 7/1.70 | 1.0 | 6.4 | 8.0 | 0.0050 | 1.15 | 174 |
| 25 | 7/2.14 | 1.2 | 8.1 | 10.1 | 0.0050 | 0.727 | 274 |
| 35 | 19/1.53 | 1.2 | 9.0 | 11.3 | 0.0043 | 0.524 | 371 |
| 50 | 19/1.78 | 1.4 | 10.6 | 13.2 | 0.0043 | 0.387 | 502 |
| 70 | 19/2.14 | 1.4 | 12.1 | 15.1 | 0.0035 | 0.268 | 709 |
| 95 | 19/2.52 | 1.6 | 14.1 | 17.6 | 0.0035 | 0.193 | 980 |
| 120 | 37/2.03 | 1.6 | 15.6 | 19.4 | 0.0032 | 0.153 | 1215 |
| 150 | 37/2.25 | 1.8 | 17.3 | 21.6 | 0.0032 | 0.124 | 1495 |
| 185 | 37/2.52 | 2.0 | 19.3 | 24.1 | 0.0032 | 0.0991 | 1873 |
| 240 | 61/2.25 | 2.2 | 22.0 | 27.5 | 0.0032 | 0.0754 | 2444 |
| 300 | 61/2.52 | 2.4 | 24.5 | 30.6 | 0.0030 | 0.0601 | 3058 |
| 400 | 61/2.85 | 2.6 | 27.5 | 34.3 | 0.0028 | 0.0470 | 3895 |
| 500 | 61/3.2 | 2.8 | 30.5 | 38.2 | 0.0028 | 0.0366 | 4893 |
| 630 | 91/2.98 | 2.8 | 34.0 | 42.5 | 0.0025 | 0.0283 | 6266 |

# 2.1. LSHF - Copper

## 2.1.2
## Single Core Thermosetting Insulated, Non-Sheathed Cable - Flexible Conductor




**Specifications**

| | | |
|---|---|---|
| **Type** | | : Cu/LSHF |
| **Standard** | | : BS 7211/ EN 50525-3-41 |
| **Nominal Voltage** | | : 450/750V or 300/500V |
| **Conductor** | | : Class 5 Annealed Copper Wires |
| **Insulation** | Material | : LSHF material - EI 5 |
| | Colour | : Green/Yellow, Blue or other colour |

| Nominal Cross Sectional area | No. & Dia. Of wires | Nominal Insulation Thickness | Mean Overall Diameter | | Minimum Insulation Resistance at 90 °C | Max. d.c. Resistance at 20 °C | Approx. Weight |
|---|---|---|---|---|---|---|---|
| | | | Lower limit | Upper limit | | | |
| mm² | x/mm | mm | mm | mm | MΩ.km | Ω/km | kg/km |
| 300/500V | | | | | | | |
| 0.5 | 16/0.20 | 0.6 | 2.1 | 2.6 | 0.013 | 39.0 | 9 |
| 0.75 | 24/0.20 | 0.6 | 2.2 | 2.8 | 0.011 | 26.0 | 11 |
| 1 | 32/0.20 | 0.6 | 2.4 | 2.9 | 0.010 | 19.5 | 14 |
| 450/750V | | | | | | | |
| 1.5 | 30/0.25 | 0.7 | 2.8 | 3.5 | 0.010 | 13.3 | 21 |
| 2.5 | 50/0.25 | 0.8 | 3.4 | 4.3 | 0.009 | 7.98 | 33 |
| 4 | 56/0.30 | 0.8 | 3.9 | 4.9 | 0.007 | 4.95 | 48 |
| 6 | 84/0.30 | 0.8 | 4.4 | 5.5 | 0.006 | 3.30 | 68 |
| 10 | 80/0.40 | 1.0 | 5.7 | 7.1 | 0.0056 | 1.91 | 115 |
| 16 | 126/0.40 | 1.0 | 6.7 | 8.4 | 0.0046 | 1.21 | 172 |
| 25 | 196/0.40 | 1.2 | 8.4 | 10.6 | 0.0044 | 0.78 | 265 |
| 35 | 276/0.40 | 1.2 | 9.7 | 12.1 | 0.0038 | 0.554 | 363 |
| 50 | 396/0.40 | 1.4 | 11.5 | 14.4 | 0.0037 | 0.386 | 518 |
| 70 | 360/0.50 | 1.4 | 13.2 | 16.6 | 0.0032 | 0.272 | 718 |
| 95 | 475/0.50 | 1.6 | 15.1 | 18.8 | 0.0032 | 0.206 | 947 |
| 120 | 608/0.50 | 1.6 | 16.7 | 20.9 | 0.0029 | 0.161 | 1195 |
| 150 | 756/0.50 | 1.8 | 18.6 | 23.3 | 0.0029 | 0.129 | 1488 |
| 185 | 925/0.50 | 2.0 | 20.6 | 25.8 | 0.0029 | 0.106 | 1821 |
| 240 | 1221/0.50 | 2.2 | 23.5 | 29.4 | 0.0028 | 0.0801 | 2393 |

## 2.1.3
## Single Core Thermosetting Insulated and Sheathed Cable - Rigid Conductor

**Specifications**

| | | |
|---|---|---|
| **Type** | | : Cu/XLPE/LSHF |
| **Standard** | | : BS 7211 |
| **Nominal Voltage** | | : 450/750V |
| **Conductor** | | : Class 1 or 2 Annealed Copper Wires |
| **Insulation** | Material | : XLPE |
| | Colour | : Refer last page "CABLE CORE COLOURS" |
| **Sheathing** | Material | : LSHF material - LTS 4 |
| | Colour | : Orange, Black or any other colour |

| Nominal Cross Sectional Area | No. & Dia. Of wires | Nominal Insulation Thickness | Nominal Sheathing Thickness | Mean Overall Diameter | | Minimum Insulation Resistance at 90 °C | Max. d.c. Resistance at 20 °C | Approx. Weight |
|---|---|---|---|---|---|---|---|---|
| | | | | Lower limit | Upper limit | | | |
| mm² | x/mm | mm | mm | mm | mm | MΩ.km | Ω/km | kg/km |
| 1 | 1/1.13 | 0.7 | 0.8 | 3.9 | 4.8 | 0.011 | 18.1 | 26 |
| 1.5 | 1/1.38 | 0.7 | 0.8 | 4.2 | 5.0 | 0.011 | 12.1 | 32 |
| 1.5 | 7/0.53 | 0.7 | 0.8 | 4.3 | 5.2 | 0.010 | 12.1 | 35 |
| 2.5 | 1/1.78 | 0.7 | 0.8 | 4.6 | 5.5 | 0.0092 | 7.41 | 44 |
| 2.5 | 7/0.67 | 0.7 | 0.8 | 4.7 | 5.6 | 0.0084 | 7.41 | 46 |
| 4 | 7/0.85 | 0.7 | 0.9 | 5.3 | 6.4 | 0.0070 | 4.61 | 66 |
| 6 | 7/1.04 | 0.7 | 0.9 | 5.9 | 7.1 | 0.0059 | 3.08 | 88 |
| 10 | 7/1.35 | 0.7 | 0.9 | 6.7 | 8.1 | 0.0047 | 1.83 | 132 |
| 16 | 7/1.70 | 0.7 | 0.9 | 7.6 | 9.2 | 0.0039 | 1.15 | 193 |
| 25 | 7/2.14 | 0.9 | 1.0 | 9.4 | 11.4 | 0.0039 | 0.727 | 300 |
| 35 | 19/1.53 | 0.9 | 1.1 | 10.6 | 12.8 | 0.0034 | 0.524 | 405 |

# 2.1. LSHF - Copper

## 2.1.4
## Multicore Thermosetting Insulated and Sheathed Cable - Rigid Conductor

**Specifications**

| | | |
|---|---|---|
| **Type** | | : Cu/XLPE/LSHF |
| **Standard** | | : BS 7211 |
| **Nominal Voltage** | | : 450/750V |
| **Conductor** | | : Class 1 or 2 Annealed Copper Wires |
| **Insulation** | Material | : XLPE |
| | Colour | : Refer last page "CABLE CORE COLOURS" |
| **Sheathing** | Material | : LSHF material - LTS 4 |
| | Colour | : Orange, Black or any other colour |

| Nominal Cross Sectional Area | No. & Dia. Of wires | Nominal Insulation Thickness | Nominal Bedding Thickness | Nominal Sheathing Thickness | Mean Overall Diameter | | Minimum Insulation Resistance at 90 °C | Max. d.c. Resistance at 20 °C | Approx. Weight |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Lower limit | Upper limit | | | |
| mm² | x/mm | mm | mm | mm | mm | mm | MΩ.km | Ω/km | kg/km |
| Two Core Cables | | | | | | | | | |
| 1.5 | 1/1.38 | 0.7 | 0.4 | 1.2 | 8.4 | 10.1 | 0.011 | 12.1 | 115 |
| 1.5 | 7/0.53 | 0.7 | 0.4 | 1.2 | 8.5 | 10.3 | 0. 010 | 12.1 | 124 |
| 2.5 | 1/1.78 | 0.7 | 0.4 | 1.2 | 9.1 | 11.0 | 0.0092 | 7.41 | 148 |
| 2.5 | 7/0.67 | 0.7 | 0.4 | 1.2 | 9.3 | 11.3 | 0.0084 | 7.41 | 157 |
| 4 | 1/2.24 | 0.7 | 0.4 | 1.2 | 10.0 | 12.1 | 0.0077 | 4.61 | 192 |
| 4 | 7/0.85 | 0.7 | 0.4 | 1.2 | 10.3 | 12.4 | 0.0070 | 4.61 | 207 |
| 6 | 1/2.74 | 0.7 | 0.4 | 1.2 | 10.9 | 13.2 | 0.0065 | 3.08 | 248 |
| 6 | 7/1.04 | 0.7 | 0.4 | 1.2 | 11.3 | 13.7 | 0.0059 | 3.08 | 268 |
| 10 | 1/3.56 | 0.7 | 0.4 | 1.4 | 12.9 | 15.5 | 0.0053 | 1.83 | 373 |
| 10 | 7/1.35 | 0.7 | 0.6 | 1.4 | 13.8 | 16.7 | 0.0047 | 1.83 | 416 |
| 16 | 7/1.70 | 0.7 | 0.6 | 1.4 | 15.6 | 18.8 | 0.0039 | 1.15 | 584 |
| 25 | 7/2.14 | 0.9 | 0.8 | 1.4 | 19.2 | 23.2 | 0.0039 | 0.727 | 894 |
| 35 | 19/1.53 | 0.9 | 0.8 | 1.6 | 21.5 | 26.0 | 0.0034 | 0.524 | 1191 |
| Three Core Cables | | | | | | | | | |
| 1.5 | 1/1.38 | 0.7 | 0.4 | 1.2 | 8.8 | 10.6 | 0.011 | 12.1 | 131 |
| 1.5 | 7/0.53 | 0.7 | 0.4 | 1.2 | 9 | 10.9 | 0.010 | 12.1 | 140 |
| 2.5 | 1/1.78 | 0.7 | 0.4 | 1.2 | 9.6 | 11.6 | 0.0092 | 7.41 | 172 |
| 2.5 | 7/0.67 | 0.7 | 0.4 | 1.2 | 9.8 | 11.9 | 0.0084 | 7.41 | 180 |
| 4 | 1/2.24 | 0.7 | 0.4 | 1.2 | 10.5 | 12.7 | 0.0077 | 4.61 | 228 |
| 4 | 7/0.85 | 0.7 | 0.4 | 1.2 | 10.8 | 13.1 | 0.0070 | 4.61 | 242 |
| 6 | 1/2.74 | 0.7 | 0.4 | 1.2 | 11.8 | 14.0 | 0.0065 | 3.08 | 300 |
| 6 | 7/1.04 | 0.7 | 0.4 | 1.4 | 12.4 | 15.0 | 0.0059 | 3.08 | 333 |
| 10 | 1/3.56 | 0.7 | 0.6 | 1.4 | 14.0 | 16.9 | 0.0053 | 1.83 | 474 |
| 10 | 7/1.35 | 0.7 | 0.6 | 1.4 | 14.6 | 17.5 | 0.0047 | 1.83 | 503 |
| 16 | 7/1.70 | 0.7 | 0.6 | 1.4 | 16.5 | 19.9 | 0.0039 | 1.15 | 648 |
| 25 | 7/2.14 | 0.9 | 0.8 | 1.4 | 20.4 | 24.7 | 0.0039 | 0.727 | 991 |
| 35 | 19/1.53 | 0.9 | 0.8 | 1.6 | 22.9 | 27.6 | 0.0034 | 0.524 | 1330 |

## 2.1.4
## Multicore Thermosetting Insulated and Sheathed Cable - Rigid Conductor (Continued)

**Specifications**

| | | |
|---|---|---|
| **Type** | | : Cu/XLPE/LSHF |
| **Standard** | | : BS 7211 |
| **Nominal Voltage** | | : 450/750V |
| **Conductor** | | : Class 1 or 2 Annealed Copper Wires |
| **Insulation** | Material | : XLPE |
| | Colour | : Refer last page "CABLE CORE COLOURS" |
| **Sheathing** | Material | : LSHF material - LTS 4 |
| | Colour | : Orange, Black or any other colour |

| Nominal Cross Sectional Area | No. & Dia. Of wires | Nominal Insulation Thickness | Nominal Bedding Thickness | Nominal Sheathing Thickness | Mean Overall Diameter | | Minimum Insulation Resistance at 90 °C | Max. d.c. Resistance at 20 °C | Approx. Weight |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Lower limit | Upper limit | | | |
| mm² | x/mm | mm | mm | mm | mm | mm | MΩ.km | Ω/km | kg/km |
| Four Core Cables | | | | | | | | | |
| 1.5 | 1/1.38 | 0.7 | 0.4 | 1.2 | 9.5 | 11.4 | 0.011 | 12.1 | 155 |
| 1.5 | 7/0.53 | 0.7 | 0.4 | 1.2 | 9.7 | 11.7 | 0.010 | 12.1 | 166 |
| 2.5 | 1/1.78 | 0.7 | 0.4 | 1.2 | 10.4 | 12.6 | 0.0092 | 7.41 | 207 |
| 2.5 | 7/0.67 | 0.7 | 0.4 | 1.2 | 10.6 | 12.8 | 0.0084 | 7.41 | 217 |
| 4 | 1/2.24 | 0.7 | 0.4 | 1.2 | 11.4 | 13.8 | 0.0077 | 4.61 | 278 |
| 4 | 7/0.85 | 0.7 | 0.4 | 1.2 | 11.6 | 14.0 | 0.0070 | 4.61 | 295 |
| 6 | 1/2.74 | 0.7 | 0.4 | 1.4 | 13.0 | 15.7 | 0.0065 | 3.08 | 385 |
| 6 | 7/1.04 | 0.7 | 0.6 | 1.4 | 13.8 | 16.7 | 0.0059 | 3.08 | 423 |
| 10 | 1/3.56 | 0.7 | 0.6 | 1.4 | 15.2 | 18.4 | 0.0053 | 1.83 | 588 |
| 10 | 7/1.35 | 0.7 | 0.6 | 1.4 | 15.9 | 19.2 | 0.0047 | 1.83 | 622 |
| 16 | 7/1.70 | 0.7 | 0.6 | 1.4 | 18.0 | 21.8 | 0.0039 | 1.15 | 826 |
| 25 | 7/2.14 | 0.9 | 0.8 | 1.6 | 22.7 | 27.5 | 0.0039 | 0.727 | 1295 |
| 35 | 19/1.53 | 0.9 | 1.0 | 1.6 | 25.4 | 30.7 | 0.0034 | 0.524 | 1737 |
| Five Core Cables | | | | | | | | | |
| 1.5 | 1/1.38 | 0.7 | 0.4 | 1.2 | 10.2 | 12.3 | 0.011 | 12.1 | 180 |
| 1.5 | 7/0.53 | 0.7 | 0.4 | 1.2 | 10.5 | 12.6 | 0.010 | 12.1 | 193 |
| 2.5 | 1/1.78 | 0.7 | 0.4 | 1.2 | 11.2 | 13.6 | 0.0092 | 7.41 | 243 |
| 2.5 | 7/0.67 | 0.7 | 0.4 | 1.2 | 11.5 | 13.9 | 0.0084 | 7.41 | 254 |
| 4 | 1/2.24 | 0.7 | 0.4 | 1.4 | 12.8 | 15.5 | 0.0077 | 4.61 | 344 |
| 4 | 7/0.85 | 0.7 | 0.6 | 1.4 | 13.6 | 16.4 | 0.0070 | 4.61 | 379 |
| 6 | 1/2.74 | 0.7 | 0.6 | 1.4 | 14.5 | 17.5 | 0.0065 | 3.08 | 474 |
| 6 | 7/1.04 | 0.7 | 0.6 | 1.4 | 15.0 | 18.1 | 0.0059 | 3.08 | 501 |
| 10 | 1/3.56 | 0.7 | 0.6 | 1.4 | 16.5 | 20.0 | 0.0053 | 1.83 | 704 |
| 10 | 7/1.35 | 0.7 | 0.6 | 1.4 | 17.3 | 20.9 | 0.0047 | 1.83 | 743 |
| 16 | 7/1.70 | 0.7 | 0.8 | 1.4 | 20.0 | 24.2 | 0.0039 | 1.15 | 1027 |
| 25 | 7/2.14 | 0.9 | 1.0 | 1.6 | 25.2 | 30.5 | 0.0039 | 0.727 | 1606 |
| 35 | 19/1.53 | 0.9 | 1.0 | 1.6 | 27.8 | 33.6 | 0.0034 | 0.524 | 2120 |

# 2.1. LSHF - Copper

## 2.1.5
## Single Core, Flat Twin & Flat Three Core Thermosetting Insulated and Sheathed Cable with Circuit Protective Conductor

| | | |
|---|---|---|
| **Type** | | : Cu/XLPE/LSHF |
| **Standard** | | : BS 7211 |
| **Nominal Voltage** | | : 300/500V |
| **Conductor** | | : Class 1 or 2 Annealed Copper Wires |
| **Insulation** | Material | : XLPE |
| | Colour | : Refer last page "CABLE CORE COLOURS" |
| **Sheathing** | Material | : LSHF material - LTS 2 |
| | Colour | : Orange |

| Nominal Cross sectional area | No. & Dia. Of wires | Nominal Insulation Thickness | Nominal Sheathing Thickness | Mean Overall Diameter | | Circuit Protective Conductor (Uninsulated) | | Minimum insulation resistance at 90 ºC | Approx. Weight |
|---|---|---|---|---|---|---|---|---|---|
| | | | | lower limit | upper limit | nominal cross-sectional area | No. & Dia. Of wires | | |
| mm² | x/mm | mm | mm | mm | mm | mm² | x/mm | MΩ.km | kg/km |
| **Single Core** | | | | | | | | | |
| 1 | 1/1.13 | 0.7 | 0.9 | 4.1x5.2 | 5.0x6.3 | 1.0 | 1/1.13 | 0.011 | 26 |
| 1.5 | 1/1.38 | 0.7 | 0.9 | 4.4x5.4 | 5.3x6.6 | 1.0 | 1/1.13 | 0.011 | 33 |
| **Flat Twin** | | | | | | | | | |
| 1 | 1/1.13 | 0.7 | 0.9 | 4.1x7.6 | 5.0x9.1 | 1.0 | 1/1.13 | 0.011 | 49 |
| 1.5 | 1/1.38 | 0.7 | 0.9 | 4.4x8.1 | 5.3x9.7 | 1.0 | 1/1.13 | 0.011 | 59 |
| 1.5 | 7/0.53 | 0.7 | 0.9 | 4.5x8.3 | 5.4x10.0 | 1.0 | 1/1.13 | 0.011 | 62 |
| 2.5 | 1/1.78 | 0.7 | 1 | 4.9x9.3 | 6.0x11.2 | 1.5 | 1/1.38 | 0.0092 | 87 |
| 2.5 | 7/0.67 | 0.7 | 1 | 5.0x9.5 | 6.1x11.4 | 1.5 | 1/1.38 | 0.0084 | 89 |
| 4 | 7/0.85 | 0.7 | 1 | 5.5x10.4 | 6.7x12.6 | 1.5 | 1/1.38 | 0.0070 | 120 |
| 6 | 7/1.04 | 0.7 | 1.1 | 6.2x12.0 | 7.5x14.6 | 2.5 | 1/1.78 | 0.0059 | 174 |
| 10 | 7/1.35 | 0.7 | 1.2 | 7.3x14.5 | 8.8x17.6 | 4.0 | 7/0.85 | 0.0047 | 275 |
| 16 | 7/1.70 | 0.7 | 1.3 | 8.4x17.0 | 10.1x20.5 | 6.0 | 7/1.04 | 0.0039 | 415 |
| **Flat Three Core** | | | | | | | | | |
| 1 | 1/1.13 | 0.7 | 0.9 | 4.1x10.0 | 5.1x12.1 | 1.0 | 1/1.13 | 0.011 | 65 |
| 1.5 | 1/1.38 | 0.7 | 0.9 | 4.4x10.7 | 5.3x12.9 | 1.0 | 1/1.13 | 0.011 | 81 |
| 2.5 | 1/1.78 | 0.7 | 1.0 | 4.9x12.0 | 6.0x14.6 | 1.0 | 1/1.13 | 0.0092 | 123 |
| 4 | 7/0.85 | 0.7 | 1.0 | 5.5x14.0 | 6.7x16.9 | 1.5 | 1/1.38 | 0.0070 | 181 |
| 6 | 7/1.04 | 0.7 | 1.1 | 6.2x16.2 | 7.5x19.5 | 2.5 | 1/1.78 | 0.0059 | 259 |
| 10 | 7/1.35 | 0.7 | 1.2 | 7.3x19.5 | 8.8x23.6 | 4.0 | 7/0.85 | 0.0047 | 407 |
| 16 | 7/1.70 | 0.7 | 1.3 | 8.4x22.8 | 10.1x27.6 | 6.0 | 7/1.04 | 0.0039 | 612 |

## 2.1.6
## Single Core XLPE Insulated and LSHF Sheathed Unarmoured - Circular Conductor

**Specifications**

| | | |
|---|---|---|
| **Type** | | : Cu/XLPE/LSHF |
| **Standard** | | : BS 6724 |
| **Nominal Voltage** | | : 600/1000V |
| **Conductor** | | : Class 2 Annealed Copper Wires |
| **Insulation** | Material | : XLPE |
| | Colour | : Refer last page -"CABLE CORE COLOURS" |
| **Sheathing** | Material | : LSHF material - LTS 1 |
| | Colour | : Orange, Black or any other colour |

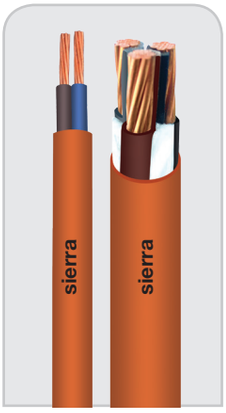
| Nominal Cross Sectional Area | No. & Dia. of wires | Nominal Insulation Thickness | Nominal Sheathing Thickness | Approx. Overall Diameter | Max. d.c. Resistance at 20 $^0$C | Approx. Weight |
|---|---|---|---|---|---|---|
| mm$^2$ | x/mm | mm | mm | mm | Ω/km | kg/km |
| 50 | 19/1.78 | 1.0 | 1.5 | 13.9 | 0.387 | 564 |
| 70 | 19/2.14 | 1.1 | 1.5 | 15.9 | 0.268 | 784 |
| 95 | 19/2.52 | 1.1 | 1.6 | 18.0 | 0.193 | 1058 |
| 120 | 37/2.03 | 1.2 | 1.6 | 19.8 | 0.153 | 1309 |
| 150 | 37/2.25 | 1.4 | 1.7 | 22.0 | 0.124 | 1604 |
| 185 | 37/2.52 | 1.6 | 1.8 | 24.4 | 0.0991 | 2002 |
| 240 | 61/2.25 | 1.7 | 1.8 | 27.3 | 0.0754 | 2574 |
| 300 | 61/2.52 | 1.8 | 1.9 | 30.1 | 0.0601 | 3200 |
| 400 | 61/2.85 | 2.0 | 2.0 | 33.7 | 0.0470 | 4063 |
| 500 | 61/3.20 | 2.2 | 2.1 | 37.4 | 0.0366 | 5088 |
| 630 | 91/2.98 | 2.4 | 2.2 | 42.0 | 0.0283 | 6527 |
| 800 | 91/3.35 | 2.6 | 2.4 | 46.9 | 0.0221 | 8215 |
| 1000 | 91/3.74 | 2.8 | 2.5 | 51.7 | 0.0176 | 10173 |

# 2.1. LSHF - Copper

## 2.1.7
## Two & Three Core XLPE Insulated and LSHF Sheathed Unarmoured - Circular Conductor

**Specifications**

| | | |
|---|---|---|
| **Type** | | : Cu/XLPE/LSHF |
| **Standard** | | : BS 6724 |
| **Nominal Voltage** | | : 600/1000V |
| **Conductor** | | : Class 2 Annealed Copper Wires |
| **Insulation** | Material | : XLPE |
| | Colour | : Refer last page -"CABLE CORE COLOURS" |
| **Sheathing** | Material | : LSHF material - LTS 1 |
| | Colour | : Orange, Black or any other colour |

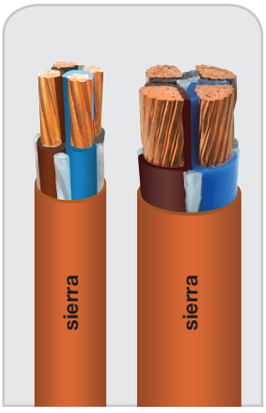



| Nominal Cross Sectional Area | Nominal Insulation Thickness | Nominal Sheathing Thickness | Approx. Overall Diameter | Max. d.c. Resistance at 20 °C | Approx. Weight |
|---|---|---|---|---|---|
| mm² | mm | mm | mm | Ω/km | kg/km |
| Two Core | | | | | |
| 2 x 1.5 | 0.6 | 1.3 | 8.5 | 12.1 | 86 |
| 2 x 2.5 | 0.7 | 1.4 | 9.9 | 7.41 | 120 |
| 2 x 4 | 0.7 | 1.4 | 11.0 | 4.61 | 158 |
| 2 x 6 | 0.7 | 1.4 | 12.1 | 3.08 | 206 |
| 2 x 10 | 0.7 | 1.5 | 14.2 | 1.83 | 306 |
| 2 x 16 | 0.7 | 1.5 | 16.3 | 1.15 | 436 |
| 2 x 25 | 0.9 | 1.6 | 19.9 | 0.727 | 661 |
| 2 x 35 | 0.9 | 1.7 | 22.6 | 0.524 | 881 |
| Three Core | | | | | |
| 3 x 1.5 | 0.6 | 1.3 | 8.9 | 12.1 | 107 |
| 3 x 2.5 | 0.7 | 1.4 | 10.5 | 7.41 | 153 |
| 3 x 4 | 0.7 | 1.4 | 11.6 | 4.61 | 206 |
| 3 x 6 | 0.7 | 1.4 | 12.9 | 3.08 | 274 |
| 3 x 10 | 0.7 | 1.5 | 15.1 | 1.83 | 416 |
| 3 x 16 | 0.7 | 1.6 | 17.5 | 1.15 | 613 |
| 3 x 25 | 0.9 | 1.7 | 21.5 | 0.727 | 937 |
| 3 x 35 | 0.9 | 1.8 | 24.3 | 0.524 | 1255 |

## 2.1.8
## Four Core XLPE Insulated and LSHF Sheathed Unarmoured - Circular & Shaped Conductor

**Specifications**

| | | |
|---|---|---|
| **Type** | | : Cu/XLPE/LSHF |
| **Standard** | | : BS 6724 |
| **Nominal Voltage** | | : 600/1000V |
| **Conductor** | | : Class 2 Annealed Copper Wires |
| **Insulation** | Material | : XLPE |
| | Colour | : Refer last page - "CABLE CORE COLOURS" |
| **Sheathing** | Material | : LSHF material - LTS 1 |
| | Colour | : Orange, Black or any other colour |




| Nominal Cross Sectional Area | Nominal Insulation Thickness | Nominal Sheathing Thickness | Approx. Overall Diameter | Max. d.c. Resistance at 20 ºC | Approx. Weight |
|---|---|---|---|---|---|
| mm² | mm | mm | mm | Ω/km | kg/km |
| Circular Stranded Conductor | | | | | |
| 4 x 1.5 | 0.6 | 1.3 | 9.6 | 12.1 | 130 |
| 4 x 2.5 | 0.7 | 1.4 | 11.4 | 7.41 | 188 |
| 4 x 4 | 0.7 | 1.4 | 12.6 | 4.61 | 258 |
| 4 x 6 | 0.7 | 1.5 | 14.2 | 3.08 | 353 |
| 4 x 10 | 0.7 | 1.5 | 16.5 | 1.83 | 530 |
| 4 x 16 | 0.7 | 1.6 | 19.2 | 1.15 | 787 |
| 4 x 25 | 0.9 | 1.7 | 23.6 | 0.727 | 1209 |
| 4 x 35 | 0.9 | 1.8 | 26.8 | 0.524 | 1625 |
| Shaped Stranded Conductor | | | | | |
| 4 x 35 | 0.9 | 1.8 | 23.0 | 0.524 | 1565 |
| 4 x 50 | 1.0 | 1.9 | 26.7 | 0.387 | 2068 |
| 4 x 70 | 1.1 | 2.1 | 31.1 | 0.268 | 2965 |
| 4 x 95 | 1.1 | 2.2 | 35.1 | 0.193 | 4013 |
| 4 x 120 | 1.2 | 2.3 | 38.9 | 0.153 | 5133 |
| 4 x 150 | 1.4 | 2.4 | 43.3 | 0.124 | 6089 |
| 4 x 185 | 1.6 | 2.6 | 48.1 | 0.0991 | 7714 |
| 4 x 240 | 1.7 | 2.7 | 53.9 | 0.0754 | 9885 |
| 4 x 300 | 1.8 | 2.9 | 59.6 | 0.0601 | 12473 |
| 4 x 400 | 2.0 | 3.2 | 68.3 | 0.0470 | 15478 |

# 2.1. LSHF - Copper

## 2.1.9
## Five Core XLPE Insulated and LSHF Sheathed Unarmoured - Circular Conductor

**Specifications**

| | | |
|---|---|---|
| **Type** | | : Cu/XLPE/LSHF |
| **Standard** | | : BS 6724 |
| **Nominal Voltage** | | : 600/1000V |
| **Conductor** | | : Class 2 Annealed Copper Wires |
| **Insulation** | Material | : XLPE |
| | Colour | : Refer last page -"CABLE CORE COLOURS" |
| **Sheathing** | Material | : LSHF material - LTS 1 |
| | Colour | : Orange, Black or any other colour |

| Nominal Cross Sectional Area | Nominal Insulation Thickness | Nominal Sheathing Thickness | Approx. Overall Diameter | Max. d.c. Resistance at 20 ⁰C | Approx. Weight |
|---|---|---|---|---|---|
| mm² | mm | mm | mm | Ω/km | kg/km |
| 5 x 1.5 | 0.6 | 1.4 | 10.6 | 12.1 | 159 |
| 5 x 2.5 | 0.7 | 1.4 | 12.3 | 7.41 | 223 |
| 5 x 4 | 0.7 | 1.5 | 13.9 | 4.61 | 317 |
| 5 x 6 | 0.7 | 1.5 | 15.5 | 3.08 | 426 |
| 5 x 10 | 0.7 | 1.6 | 18.2 | 1.83 | 654 |
| 5 x 16 | 0.7 | 1.7 | 21.3 | 1.15 | 973 |
| 5 x 25 | 0.9 | 1.8 | 26.1 | 0.727 | 1497 |
| 5 x 35 | 0.9 | 1.9 | 29.6 | 0.524 | 2013 |
| 5 x 50 | 1.0 | 2.0 | 33.7 | 0.387 | 2676 |
| 5 x 70 | 1.1 | 2.2 | 39.5 | 0.268 | 3797 |

## 2.1.10
## Multi Core XLPE Insulated and LSHF Sheathed Unarmoured - Circular Auxiliary Cable

**Specifications**

| | | |
|---|---|---|
| **Type** | | : Cu/XLPE/LSHF |
| **Standard** | | : BS 6724 |
| **Nominal Voltage** | | : 600/1000V |
| **Conductor** | | : Class 2 Annealed Copper Wires |
| **Insulation** | Material | : XLPE |
| | Colour | : White with black numbering |
| **Sheathing** | Material | : LSHF material - LTS 1 |
| | Colour | : Orange, Black or any other colour |

| Nominal Cross Sectional Area | No. & Dia. of wires | Nominal Insulation Thickness | Nominal Sheathing Thickness | Approx. Overall Diameter | Max. d.c. Resistance at 20 °C | Approx. Weight |
|---|---|---|---|---|---|---|
| mm² | x/mm | mm | mm | mm | Ω/km | kg/km |
| 7 x 1.5 | 7/0.53 | 0.6 | 1.4 | 11.5 | 12.1 | 202 |
| 12 x1.5 | 7/0.53 | | 1.5 | 14.9 | | 325 |
| 19 x 1.5 | 7/0.53 | | 1.6 | 17.5 | | 480 |
| 27 x 1.5 | 7/0.53 | | 1.7 | 20.9 | | 664 |
| 37 x 1.5 | 7/0.53 | | 1.7 | 23.3 | | 868 |
| 48 x 1.5 | 7/0.53 | | 1.8 | 26.6 | | 1111 |
| 7 x 2.5 | 7/0.67 | 0.7 | 1.4 | 13.3 | 7.41 | 288 |
| 12 x2.5 | 7/0.67 | | 1.6 | 17.7 | | 478 |
| 19 x 2.5 | 7/0.67 | | 1.7 | 20.8 | | 713 |
| 27 x 2.5 | 7/0.67 | | 1.8 | 24.9 | | 990 |
| 37 x 2.5 | 7/0.67 | | 1.8 | 27.8 | | 1303 |
| 48 x 2.5 | 7/0.67 | | 2.0 | 32.1 | | 1688 |
| 7 x 4 | 7/0.85 | 0.7 | 1.5 | 15.2 | 4.61 | 413 |
| 12 x4 | 7/0.85 | | 1.6 | 19.9 | | 678 |
| 19 x 4 | 7/0.85 | | 1.7 | 23.5 | | 1024 |
| 27 x 4 | 7/0.85 | | 1.9 | 28.4 | | 1443 |
| 37 x 4 | 7/0.85 | | 2.0 | 32.0 | | 1930 |
| 48 x 4 | 7/0.85 | | 2.1 | 36.7 | | 2477 |

# 2.1. LSHF - Copper

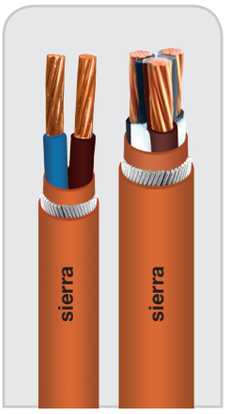
## 2.1.11
## Single Core XLPE Insulated and LSHF Sheathed Armoured - Circular Conductor

**Specifications**

| | | |
|---|---|---|
| **Type** | | : Cu/XLPE/AWA/LSHF |
| **Standard** | | : BS 6724 |
| **Nominal Voltage** | | : 600/1000V |
| **Conductor** | | : Class 2 Annealed Copper Wires |
| **Insulation** | Material | : XLPE |
| | Colour | : Refer last page - "CABLE CORE COLOURS" |
| **Sheathing** | Material | : LSHF material-LTS 1 |
| | Colour | : Orange, Black or any other colour |

| Nominal Cross Sectional Area | No. & Dia. Of wires | Nominal Insulation Thickness | Nominal Bedding Thickness | Nominal Al Armour Wire Diameter | Nominal Sheathing Thickness | Approx. Overall Diameter | Max. d.c. Resistance at 20 $^0$C | Approx. Weight |
|---|---|---|---|---|---|---|---|---|
| mm$^2$ | x/mm | mm | mm | mm | mm | mm | Ω/km | kg/km |
| 50 | 19/1.78 | 1.0 | 0.8 | 0.9 | 1.5 | 17.5 | 0.387 | 716 |
| 70 | 19/2.14 | 1.1 | 0.8 | 1.25 | 1.5 | 20.2 | 0.268 | 997 |
| 95 | 19/2.52 | 1.1 | 0.8 | 1.25 | 1.6 | 22.3 | 0.193 | 1297 |
| 120 | 37/2.03 | 1.2 | 0.8 | 1.25 | 1.6 | 24.2 | 0.153 | 1569 |
| 150 | 37/2.25 | 1.4 | 1.0 | 1.6 | 1.7 | 27.4 | 0.124 | 1976 |
| 185 | 37/2.52 | 1.6 | 1.0 | 1.6 | 1.8 | 30.0 | 0.0991 | 2411 |
| 240 | 61/2.25 | 1.7 | 1.0 | 1.6 | 1.8 | 32.8 | 0.0754 | 3027 |
| 300 | 61/2.52 | 1.8 | 1.0 | 1.6 | 1.9 | 35.6 | 0.0601 | 3696 |
| 400 | 61/2.85 | 2.0 | 1.2 | 2.0 | 2.0 | 40.5 | 0.0470 | 4753 |
| 500 | 61/3.20 | 2.2 | 1.2 | 2.0 | 2.1 | 44.2 | 0.0366 | 5848 |
| 630 | 91/2.98 | 2.4 | 1.2 | 2.0 | 2.2 | 48.8 | 0.0283 | 7373 |
| 800 | 91/3.35 | 2.6 | 1.4 | 2.5 | 2.4 | 55.4 | 0.0221 | 9378 |
| 1000 | 91/3.74 | 2.8 | 1.4 | 2.5 | 2.5 | 60.6 | 0.0176 | 11448 |

## 2.1.12
## Two & Three Core XLPE Insulated and LSHF Sheathed Armoured - Circular Conductor



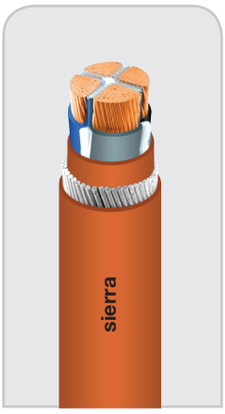

**Specifications**

| | | |
|---|---|---|
| **Type** | | : Cu/XLPE/SWA/LSHF |
| **Standard** | | : BS 6724 |
| **Nominal Voltage** | | : 600/1000V |
| **Conductor** | | : Class 2 Annealed Copper Wires |
| **Insulation** | Material | : XLPE |
| | Colour | : Refer last page - "CABLE CORE COLOURS" |
| **Sheathing** | Material | : LSHF material-LTS 1 |
| | Colour | : Orange, Black or any other colour |

| Nominal Cross Sectional Area | Nominal Insulation Thickness | Nominal Bedding Thickness | Nominal Steel Armour Wire Diameter | Nominal Sheathing Thickness | Approx. Overall Diameter | Max. d.c. Resistance at 20 $^0$C | Approx. Weight |
|---|---|---|---|---|---|---|---|
| mm$^2$ | mm | mm | mm | mm | mm | Ω/km | kg/km |
| **Two Core** | | | | | | | |
| 2 x 1.5 | 0.6 | 0.8 | 0.9 | 1.3 | 12.1 | 12.1 | 276 |
| 2 x 2.5 | 0.7 | 0.8 | 0.9 | 1.4 | 13.6 | 7.41 | 338 |
| 2 x 4 | 0.7 | 0.8 | 0.9 | 1.4 | 14.7 | 4.61 | 399 |
| 2 x 6 | 0.7 | 0.8 | 0.9 | 1.4 | 15.9 | 3.08 | 470 |
| 2 x 10 | 0.7 | 0.8 | 0.9 | 1.5 | 18.0 | 1.83 | 611 |
| 2 x 16 | 0.7 | 0.8 | 1.25 | 1.5 | 20.4 | 1.15 | 900 |
| 2 x 25 | 0.9 | 0.8 | 1.25 | 1.6 | 24.1 | 0.727 | 1221 |
| 2 x 35 | 0.9 | 1.0 | 1.6 | 1.7 | 27.7 | 0.524 | 1707 |
| **Three Core** | | | | | | | |
| 3 x 1.5 | 0.6 | 0.8 | 0.9 | 1.3 | 12.6 | 12.1 | 307 |
| 3 x 2.5 | 0.7 | 0.8 | 0.9 | 1.4 | 14.1 | 7.41 | 382 |
| 3 x 4 | 0.7 | 0.8 | 0.9 | 1.4 | 15.3 | 4.61 | 460 |
| 3 x 6 | 0.7 | 0.8 | 0.9 | 1.4 | 16.6 | 3.08 | 554 |
| 3 x 10 | 0.7 | 0.8 | 1.25 | 1.5 | 19.5 | 1.83 | 847 |
| 3 x 16 | 0.7 | 0.8 | 1.25 | 1.6 | 21.6 | 1.15 | 1108 |
| 3 x 25 | 0.9 | 1.0 | 1.6 | 1.7 | 26.7 | 0.727 | 1723 |
| 3 x 35 | 0.9 | 1.0 | 1.6 | 1.8 | 29.4 | 0.524 | 2136 |

# 2.1. LSHF - Copper

## 2.1.13
## Four Core XLPE Insulated and LSHF Sheathed Armoured - Circular & Shaped Conductor




**Specifications**

| | | |
|---|---|---|
| **Type** | | : Cu/XLPE/SWA/LSHF |
| **Standard** | | : BS 6724 |
| **Nominal Voltage** | | : 600/1000V |
| **Conductor** | | : Class 2 Annealed Copper Wires |
| **Insulation** | Material | : XLPE |
| | Colour | : Refer last page - "CABLE CORE COLOURS" |
| **Sheathing** | Material | : LSHF material-LTS 1 |
| | Colour | : Orange, Black or any other colour |

| Nominal Cross Sectional Area | Nominal Insulation Thickness | Nominal Bedding Thickness | Nominal Steel Armour Wire Diameter | Nominal Sheathing Thickness | Approx. Overall Diameter | Max. d.c. Resistance at 20 °C | Approx. Weight |
|---|---|---|---|---|---|---|---|
| mm² | mm | mm | mm | mm | mm | Ω/km | kg/km |
| **Circular Stranded Conductor** | | | | | | | |
| 4 x 1.5 | 0.6 | 0.8 | 0.9 | 1.3 | 13.3 | 12.1 | 345 |
| 4 x 2.5 | 0.7 | 0.8 | 0.9 | 1.4 | 15.0 | 7.41 | 436 |
| 4 x 4 | 0.7 | 0.8 | 0.9 | 1.4 | 16.4 | 4.61 | 533 |
| 4 x 6 | 0.7 | 0.8 | 1.25 | 1.5 | 18.7 | 3.08 | 761 |
| 4 x 10 | 0.7 | 0.8 | 1.25 | 1.5 | 21.1 | 1.83 | 999 |
| 4 x 16 | 0.7 | 0.8 | 1.25 | 1.6 | 23.4 | 1.15 | 1328 |
| 4 x 25 | 0.9 | 1.0 | 1.6 | 1.7 | 28.9 | 0.727 | 2070 |
| 4 x 35 | 0.9 | 1.0 | 1.6 | 1.8 | 31.9 | 0.524 | 2592 |
| **Shaped Stranded Conductor** | | | | | | | |
| 4 x 35 | 0.9 | 1.0 | 1.6 | 1.8 | 28.6 | 0.524 | 2403 |
| 4 x 50 | 1.0 | 1.0 | 1.6 | 1.9 | 32.0 | 0.387 | 3030 |
| 4 x 70 | 1.1 | 1.2 | 2.0 | 2.1 | 37.7 | 0.268 | 4366 |
| 4 x 95 | 1.1 | 1.2 | 2.0 | 2.2 | 41.7 | 0.193 | 5584 |
| 4 x 120 | 1.2 | 1.4 | 2.5 | 2.3 | 47.1 | 0.153 | 7320 |
| 4 x 150 | 1.4 | 1.4 | 2.5 | 2.4 | 51.4 | 0.124 | 8505 |
| 4 x 185 | 1.6 | 1.4 | 2.5 | 2.6 | 56.6 | 0.0991 | 10371 |
| 4 x 240 | 1.7 | 1.6 | 2.5 | 2.7 | 63.0 | 0.0754 | 12922 |
| 4 x 300 | 1.8 | 1.6 | 2.5 | 2.9 | 68.8 | 0.0601 | 15812 |
| 4 x 400 | 2.0 | 1.8 | 3.15 | 3.2 | 78.1 | 0.0470 | 20238 |

## 2.1.14
## Five Core XLPE Insulated and LSHF Sheathed Armoured - Circular Conductor

**Specifications**

| | | |
|---|---|---|
| **Type** | | : Cu/XLPE/SWA/LSHF |
| **Standard** | | : BS 6724 |
| **Nominal Voltage** | | : 600/1000V |
| **Conductor** | | : Class 2 Annealed Copper Wires |
| **Insulation** | Material | : XLPE |
| | Colour | : Refer last page - "CABLE CORE COLOURS" |
| **Sheathing** | Material | : LSHF material-LTS 1 |
| | Colour | : Orange, Black or any other colour |

| Nominal Cross Sectional Area | Nominal Insulation Thickness | Nominal Bedding Thickness | Nominal Steel Armour Wire Diameter | Nominal Sheathing Thickness | Approx. Overall Diameter | Max. d.c. Resistance at 20 °C | Approx. Weight |
|---|---|---|---|---|---|---|---|
| $mm^2$ | mm | mm | mm | mm | mm | Ω/km | kg/km |
| 5 x 1.5 | 0.6 | 0.8 | 0.9 | 1.4 | 14.3 | 12.1 | 392 |
| 5 x 2.5 | 0.7 | 0.8 | 0.9 | 1.4 | 16.1 | 7.41 | 491 |
| 5 x 4 | 0.7 | 0.8 | 0.9 | 1.5 | 17.8 | 4.61 | 617 |
| 5 x 6 | 0.7 | 0.8 | 1.25 | 1.5 | 20.0 | 3.08 | 869 |
| 5 x 10 | 0.7 | 0.8 | 1.25 | 1.6 | 22.9 | 1.83 | 1168 |
| 5 x 16 | 0.7 | 1.0 | 1.6 | 1.7 | 26.6 | 1.15 | 1752 |
| 5 x 25 | 0.9 | 1.0 | 1.6 | 1.8 | 31.5 | 0.727 | 2440 |
| 5 x 35 | 0.9 | 1.0 | 1.6 | 1.9 | 34.8 | 0.524 | 3074 |
| 5 x 50 | 1.0 | 1.2 | 2.0 | 2.0 | 40.4 | 0.387 | 4198 |
| 5 x 70 | 1.1 | 1.2 | 2.0 | 2.2 | 46.3 | 0.268 | 5559 |

# 2.1. LSHF - Copper

## 2.1.15
## Multi Core XLPE Insulated and LSHF Sheathed Armoured - Circular Auxiliary Cable

**Specifications**

| | | |
|---|---|---|
| **Type** | | : Cu/XLPE/SWA/LSHF |
| **Standard** | | : BS 6724 |
| **Nominal Voltage** | | : 600/1000V |
| **Conductor** | | : Class 2 Annealed Copper Wires |
| **Insulation** | Material | : XLPE |
| | Colour | : White with black numbering |
| **Sheathing** | Material | : LSHF material-LTS 1 |
| | Colour | : Orange, Black or any other colour |

| Nominal Cross Sectional Area | No. & Dia. Of wires | Nominal Insulation Thickness | Nominal Bedding Thickness | Nominal Steel Armour Wire Diameter | Nominal Sheathing Thickness | Approx. Overall Diameter | Max. d.c. Resistance at 20 °C | Approx. Weight |
|---|---|---|---|---|---|---|---|---|
| mm² | x/mm | mm | mm | mm | mm | mm | Ω/km | kg/km |
| 7 x 1.5 | 7/0.53 | 0.6 | 0.8 | 0.9 | 1.4 | 15.2 | 12.1 | 453 |
| 12 x1.5 | 7/0.53 | | 0.8 | 1.25 | 1.5 | 19.4 | | 751 |
| 19 x 1.5 | 7/0.53 | | 0.8 | 1.25 | 1.6 | 22.2 | | 973 |
| 27 x 1.5 | 7/0.53 | | 1.0 | 1.6 | 1.7 | 26.7 | | 1430 |
| 37 x 1.5 | 7/0.53 | | 1.0 | 1.6 | 1.7 | 29.0 | | 1716 |
| 48 x 1.5 | 7/0.53 | | 1.0 | 1.6 | 1.8 | 32.7 | | 2074 |
| 7 x 2.5 | 7/0.67 | 0.7 | 0.8 | 0.9 | 1.4 | 17.1 | 7.41 | 577 |
| 12 x2.5 | 7/0.67 | | 0.8 | 1.25 | 1.6 | 22.4 | | 977 |
| 19 x 2.5 | 7/0.67 | | 1.0 | 1.6 | 1.7 | 26.6 | | 1475 |
| 27 x 2.5 | 7/0.67 | | 1.0 | 1.6 | 1.8 | 30.7 | | 1891 |
| 37 x 2.5 | 7/0.67 | | 1.0 | 1.6 | 1.8 | 33.8 | | 2304 |
| 48 x 2.5 | 7/0.67 | | 1.2 | 2.0 | 2.0 | 39.3 | | 3139 |
| 7 x 4 | 7/0.85 | 0.7 | 0.8 | 1.25 | 1.5 | 19.7 | 4.61 | 846 |
| 12 x4 | 7/0.85 | | 1.0 | 1.6 | 1.6 | 25.7 | | 1416 |
| 19 x 4 | 7/0.85 | | 1.0 | 1.6 | 1.7 | 29.3 | | 1879 |
| 27 x 4 | 7/0.85 | | 1.0 | 1.6 | 1.9 | 34.4 | | 2462 |
| 37 x 4 | 7/0.85 | | 1.2 | 2.0 | 2.0 | 39.2 | | 3375 |
| 48 x 4 | 7/0.85 | | 1.2 | 2.0 | 2.1 | 44.1 | | 4122 |

## 2.2.1
## Single Core XLPE Insulated and LSHF Sheathed Unarmoured - Circular Conductor

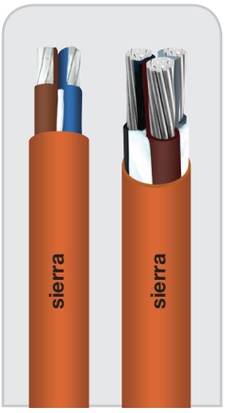
**Specifications**

| | | |
|---|---|---|
| **Type** | | : Al/XLPE/LSHF |
| **Standard** | | : BS 6724 |
| **Nominal Voltage** | | : 600/1000V |
| **Conductor** | | : Stranded Aluminum Wires |
| **Insulation** | Material | : XLPE |
| | Colour | : Refer last page - "CABLE CORE COLOURS" |
| **Sheathing** | Material | : LSHF material-LTS 1 |
| | Colour | : Orange, Black or any other colour |

| Nominal Cross Sectional Area | No. & Dia. Of wires | Nominal Insulation Thickness | Nominal Sheathing Thickness | Approx. Overall Diameter | Max. d.c. Resistance at 20 °C | Approx. Weight |
|---|---|---|---|---|---|---|
| mm² | x/mm | mm | mm | mm | Ω/km | kg/km |
| 50 | 19/1.78 | 1.0 | 1.5 | 13.9 | 0.641 | 265 |
| 70 | 19/2.14 | 1.1 | 1.5 | 15.9 | 0.443 | 352 |
| 95 | 19/2.52 | 1.1 | 1.6 | 18.0 | 0.320 | 460 |
| 120 | 37/2.03 | 1.2 | 1.6 | 19.8 | 0.253 | 552 |
| 150 | 37/2.25 | 1.4 | 1.7 | 22.0 | 0.206 | 675 |
| 185 | 37/2.52 | 1.6 | 1.8 | 24.4 | 0.164 | 836 |
| 240 | 61/2.25 | 1.7 | 1.8 | 27.3 | 0.125 | 1042 |
| 300 | 61/2.52 | 1.8 | 1.9 | 30.1 | 0.100 | 1278 |
| 400 | 61/2.85 | 2.0 | 2.0 | 33.7 | 0.0778 | 1604 |
| 500 | 61/3.20 | 2.2 | 2.1 | 37.4 | 0.0605 | 1988 |
| 630 | 91/2.98 | 2.4 | 2.2 | 42.0 | 0.0469 | 2517 |
| 800 | 91/3.35 | 2.6 | 2.3 | 46.9 | 0.0367 | 3148 |
| 1000 | 91/3.74 | 2.8 | 2.5 | 51.7 | 0.0291 | 3857 |

# 2.2. LSHF - Aluminium

## 2.2.2
## Two & Three Core XLPE Insulated and LSHF Sheathed Unarmoured - Circular Conductor

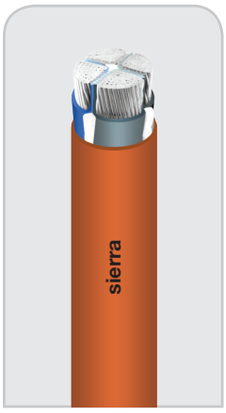



**Specifications**

| | | |
|---|---|---|
| **Type** | | : Al/XLPE/LSHF |
| **Standard** | | : BS 6724 |
| **Nominal Voltage** | | : 600/1000V |
| **Conductor** | | : Stranded Aluminium Wires |
| **Insulation** | Material | : XLPE |
| | Colour | : Refer last page - "CABLE CORE COLOURS" |
| **Sheathing** | Material | : LSHF material-LTS 1 |
| | Colour | : Orange, Black or any other colour |

| Nominal Cross Sectional Area | Nominal Insulation Thickness | Nominal Sheathing Thickness | Approx. Overall Diameter | Max. d.c. Resistance at 20 $^0$C | Approx. Weight |
|---|---|---|---|---|---|
| mm² | mm | mm | mm | Ω/km | kg/km |
| **Two Core** | | | | | |
| 2 x 16 | 0.7 | 1.5 | 16.3 | 1.91 | 234 |
| 2 x 25 | 0.9 | 1.6 | 19.9 | 1.20 | 341 |
| 2 x 35 | 0.9 | 1.7 | 22.6 | 0.868 | 438 |
| **Three Core** | | | | | |
| 3 x 16 | 0.7 | 1.6 | 17.5 | 1.91 | 310 |
| 3 x 25 | 0.9 | 1.7 | 21.4 | 1.20 | 457 |
| 3 x 35 | 0.9 | 1.8 | 24.3 | 0.868 | 589 |

## 2.2.3
## Four Core XLPE Insulated and LSHF Sheathed Unarmoured - Circular & Shaped Conductor




**Specifications**

| | | |
|---|---|---|
| **Type** | | : Al/XLPE/LSHF |
| **Standard** | | : BS 6724 |
| **Nominal Voltage** | | : 600/1000V |
| **Conductor** | | : Stranded Aluminium Wires |
| **Insulation** | Material | : XLPE |
| | Colour | : Refer last page - "CABLE CORE COLOURS" |
| **Sheathing** | Material | : LSHF material-LTS 1 |
| | Colour | : Orange, Black or any other colour |

| Nominal Cross Sectional Area | Nominal Insulation Thickness | Nominal Sheathing Thickness | Approx. Overall Diameter | Max. d.c. Resistance at 20 ⁰C | Approx. Weight |
|---|---|---|---|---|---|
| mm² | mm | mm | mm | Ω/km | kg/km |
| **Circular Stranded Conductor** | | | | | |
| 4 x 16 | 0.7 | 1.6 | 19.2 | 1.91 | 383 |
| 4 x 25 | 0.9 | 1.7 | 23.6 | 1.20 | 570 |
| 4 x 35 | 0.9 | 1.8 | 26.8 | 0.868 | 738 |
| **Shaped Stranded Conductor** | | | | | |
| 4 x 35 | 0.9 | 1.8 | 23.0 | 0.868 | 683 |
| 4 x 50 | 1.0 | 1.9 | 26.8 | 0.641 | 888 |
| 4 x 70 | 1.1 | 2.1 | 31.1 | 0.443 | 1238 |
| 4 x 95 | 1.1 | 2.2 | 35.1 | 0.320 | 1618 |
| 4 x 120 | 1.2 | 2.3 | 39.0 | 0.253 | 2034 |
| 4 x 150 | 1.4 | 2.4 | 43.3 | 0.206 | 2421 |
| 4 x 185 | 1.6 | 2.6 | 48.1 | 0.164 | 3049 |
| 4 x 240 | 1.7 | 2.7 | 53.9 | 0.125 | 3837 |
| 4 x 300 | 1.8 | 2.9 | 59.6 | 0.100 | 4782 |

# 2.2. LSHF - Aluminium

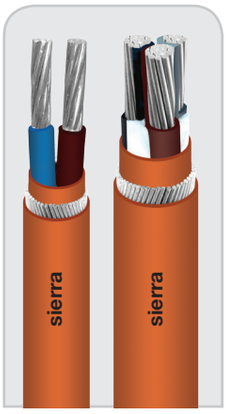
## 2.2.4
## Single Core XLPE Insulated and LSHF Sheathed Armoured - Circular Conductor

**Specifications**

| | | |
|---|---|---|
| **Type** | | : Al/XLPE/AWA/LSHF |
| **Standard** | | : BS 6724 |
| **Nominal Voltage** | | : 600/1000V |
| **Conductor** | | : Stranded Aluminium Wires |
| **Insulation** | Material | : XLPE |
| | Colour | : Refer last page - "CABLE CORE COLOURS" |
| **Sheathing** | Material | : LSHF material-LTS 1 |
| | Colour | : Orange, Black or any other colour |

| Nominal Cross Sectional Area | No. & Dia. of wires | Nominal Insulation Thickness | Nominal Bedding Thickness | Nominal Al Armour Wire Diameter | Nominal Sheathing Thickness | Approx. Overall Diameter | Max. d.c. Resistance at 20 ºC | Approx. Weight |
|---|---|---|---|---|---|---|---|---|
| $mm^2$ | x/mm | mm | mm | mm | mm | mm | Ω/km | kg/km |
| 50 | 19/1.78 | 1.0 | 0.8 | 0.9 | 1.5 | 16.3 | 0.641 | 417 |
| 70 | 19/2.14 | 1.1 | 0.8 | 1.25 | 1.5 | 18.7 | 0.443 | 566 |
| 95 | 19/2.52 | 1.1 | 0.8 | 1.25 | 1.6 | 20.6 | 0.320 | 698 |
| 120 | 37/2.03 | 1.2 | 0.8 | 1.25 | 1.6 | 22.1 | 0.253 | 813 |
| 150 | 37/2.25 | 1.4 | 1.0 | 1.6 | 1.7 | 25.2 | 0.206 | 1047 |
| 185 | 37/2.52 | 1.6 | 1.0 | 1.6 | 1.8 | 27.4 | 0.164 | 1246 |
| 240 | 61/2.25 | 1.7 | 1.0 | 1.6 | 1.8 | 29.9 | 0.125 | 1495 |
| 300 | 61/2.52 | 1.8 | 1.0 | 1.6 | 1.9 | 32.4 | 0.100 | 1774 |
| 400 | 61/2.85 | 2.0 | 1.2 | 2.0 | 2.0 | 37.1 | 0.0778 | 2294 |
| 500 | 61/3.20 | 2.2 | 1.2 | 2.0 | 2.1 | 40.4 | 0.0605 | 2749 |
| 630 | 91/2.98 | 2.4 | 1.2 | 2.0 | 2.2 | 43.8 | 0.0469 | 3363 |
| 800 | 91/3.35 | 2.6 | 1.4 | 2.5 | 2.3 | 49.1 | 0.0367 | 4282 |
| 1000 | 91/3.74 | 2.8 | 1.4 | 2.5 | 2.5 | 54.4 | 0.0291 | 5132 |

## 2.2.5
## Two & Three Core XLPE Insulated and LSHF Sheathed Armoured - Circular Conductor




**Specifications**

| | | |
|---|---|---|
| **Type** | | : Al/XLPE/SWA/LSHF |
| **Standard** | | : BS 6724 |
| **Nominal Voltage** | | : 600/1000V |
| **Conductor** | | : Stranded Aluminium Wires |
| **Insulation** | Material | : XLPE |
| | Colour | : Refer last page - “CABLE CORE COLOURS” |
| **Sheathing** | Material | : LSHF material-LTS 1 |
| | Colour | : Orange, Black or any other colour |

| Nominal Cross Sectional Area | Nominal Insulation Thickness | Nominal Bedding Thickness | Nominal Steel Armour Wire Diameter | Nominal Sheathing Thickness | Approx. Overall Diameter | Max. d.c. Resistance at 20 $^0$C | Approx. Weight |
|---|---|---|---|---|---|---|---|
| mm$^2$ | mm | mm | mm | mm | mm | Ω/km | kg/km |
| **Two Core** | | | | | | | |
| 2 x 16 | 0.7 | 0.8 | 1.25 | 1.5 | 19.1 | 1.91 | 699 |
| 2 x 25 | 0.9 | 0.8 | 1.25 | 1.6 | 22.4 | 1.20 | 902 |
| 2 x 35 | 0.9 | 1.0 | 1.6 | 1.7 | 25.7 | 0.868 | 1264 |
| **Three Core** | | | | | | | |
| 3 x 16 | 0.7 | 0.8 | 1.25 | 1.6 | 20.3 | 1.91 | 805 |
| 3 x 25 | 0.9 | 1.0 | 1.6 | 1.7 | 24.9 | 1.20 | 1243 |
| 3 x 35 | 0.9 | 1.0 | 1.6 | 1.8 | 27.3 | 0.868 | 1471 |