# Copper Coils

## Features

- The material has a minimum electrical conductivity of 101% IACS (International Annealed Copper Standard), making it one of the most conductive materials available.
- Excellent Thermal Conductivity, it exhibits (around 391-401 W/m·K), making it highly effective in heat transfer applications
- Immunity to Hydrogen Embrittlement due to its virtually non-existent oxygen content.
- Excellent formability and impact strength, allowing for shaping and forming operations.
- Good Corrosion Resistance
- C101 is highly suitable for soldering, brazing, and various welding processes (using shielded arc methods).

# RS PRO C101 Copper Coil W:50MM X T:0.05MM X LM:1116M (25KG)

**RS Stock No: 0748064**



RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

# Copper Coils

## Product Description

***RS PRO C101 Copper Coil***

*RS PRO C101 Copper Coil is a high-purity, oxygen-free electronic (OFE) grade material, renowned for its exceptional electrical and thermal performance. It is primarily valued for its exceptional electrical and thermal performance. C101 is the purest commercially available copper, typically possessing a minimum copper content of 99.99% and an oxygen content of less than 0.0005% (5 ppm).*

***Key Features***

- ***Electronics:*** *High-frequency connectors, wave guides, microwave equipment, and lead wires for circuit breakers.*
- ***High-Vacuum Systems:*** *UHV components and scientific apparatus due to its low outgassing properties.*
- ***Thermal Management:*** *Heat sinks for diodes and rectifiers, and cryogenic systems.*
- ***Power Distribution:*** *Motor and generator windings, bus bars, and transformer coils.*
- ***Audio/Visual:*** *High-end audio/visual wiring where signal clarity is paramount.*

***Typical Applications***

*C101 copper coil is used in demanding and specialized applications where quality and reliability are paramount:*

- ***Electronics:*** *Used in advanced electronics, high-frequency circuitry, and inductive components.*
- ***Energy Systems:*** *Essential for power storage, battery collector applications, and low-loss energy transfer.*
- ***Aerospace & Medical:*** *Utilized in aerospace systems, medical imaging equipment, and EMI (electromagnetic interference) shielding layers.*
- ***Cryogenics:*** *Its thermal stability makes it suitable for use in cryogenic heat exchangers and superconducting magnet leads.*

## General Specifications

| | |
|---|---|
| **Material** | Copper C101 |
| **Form** | Coil |
| **Metres** | 1116M (25KG) |
| **Grade** | C101 |
| **Colour** | Yellow / Orange |

# Copper Coils

## Mechanical Properties

| | |
|---|---|
| **Proof Stress** | 50-340 MPa |
| **Tensile Strength** | 200 – 400 MPa depending on temper |
| **Density** | 8.96g/c**m³** |
| **Melting Point** | 1083**°C** |
| **Thermal Conductivity** | 391.1 W/m·K |
| **Boiling Point** | 2562 °C |

## Similar Products

| RS Code | Width | Thickness/Guage | Length | Weight |
|---|---|---|---|---|
| 0748058 | 25MM | 0.05MM | 446M | 5KG |
| 0748059 | 25MM | 0.05MM | 892M | 10KG |
| 0748060 | 25MM | 0.05MM | 2232M | 25KG |
| 0748062 | 50MM | 0.05MM | 223M | 5KG |
| 0748063 | 50MM | 0.05MM | 446M | 10KG |
| 0748064 | 50MM | 0.05MM | 1116M | 25KG |
| 0748065 | 75MM | 0.05MM | 149M | 5KG |
| 0748066 | 75MM | 0.05MM | 298M | 10KG |
| 0748067 | 75MM | 0.05MM | 744M | 25KG |
| 0748068 | 100MM | 0.05MM | 111M | 5KG |
| 0748069 | 100MM | 0.05MM | 222M | 10KG |
| 0748124 | 100MM | 0.05MM | 558M | 25KG |
| 0748125 | 200MM | 0.05MM | 59M | 5KG |
| 0748126 | 200MM | 0.05MM | 118M | 10KG |
| 0748127 | 200MM | 0.05MM | 279M | 25KG |
| 0748128 | 25MM | 0.075MM | 297M | 5KG |
| 0748129 | 25MM | 0.075MM | 594M | 10KG |
| 0748130 | 25MM | 0.075MM | 1488M | 25KG |
| **RS Code** | **Width** | **Thickness/Guage** | **Length** | **Weight** |
| 0748131 | 50MM | 0.075MM | 148M | 5KG |
| 0748132 | 50MM | 0.075MM | 296M | 10KG |
| 0748133 | 50MM | 0.075MM | 744M | 25KG |
| 0748135 | 75MM | 0.075MM | 99M | 5KG |
| 0748136 | 75MM | 0.075MM | 198M | 10KG |
| 0748137 | 75MM | 0.075MM | 496M | 25KG |
| 0748138 | 100MM | 0.075MM | 74M | 5KG |

# Copper Coils

| | | | | |
|---|---|---|---|---|
| 0748139 | 100MM | 0.075MM | 148M | 10KG |
| 0748141 | 100MM | 0.075MM | 372M | 25KG |
| 0748142 | 200MM | 0.075MM | 37M | 5KG |
| 0748143 | 200MM | 0.075MM | 74M | 10KG |
| 0748144 | 200MM | 0.075MM | 186M | 25KG |
| 0748145 | 25MM | 0.1MM | 223M | 5KG |
| 0748146 | 25MM | 0.1MM | 446M | 10KG |
| 0748147 | 25MM | 0.1MM | 1116M | 25KG |
| 0748148 | 50MM | 0.1MM | 112M | 5KG |
| 0748149 | 50MM | 0.1MM | 224M | 10KG |
| 0748150 | 50MM | 0.1MM | 558M | 25KG |
| 0748151 | 75MM | 0.1MM | 74M | 5KG |
| 0748152 | 75MM | 0.1MM | 148M | 10KG |
| 0748153 | 75MM | 0.1MM | 372M | 25KG |
| 0748154 | 100MM | 0.1MM | 56M | 5KG |
| 0748155 | 100MM | 0.1MM | 112M | 10KG |
| 0748070 | 100MM | 0.1MM | 279M | 25KG |
| 0748071 | 200MM | 0.1MM | 28M | 5KG |
| 0748072 | 200MM | 0.1MM | 56M | 10KG |
| 0748073 | 200MM | 0.1MM | 139M | 25KG |
| 0748074 | 25MM | 0.127MM | 175M | 5KG |
| 0748075 | 25MM | 0.127MM | 350M | 10KG |
| 0748076 | 25MM | 0.127MM | 877M | 25KG |
| 0748078 | 50MM | 0.127MM | 88M | 5KG |
| 0748079 | 50MM | 0.127MM | 176M | 10KG |
| 0748080 | 50MM | 0.127MM | 419M | 25KG |
| 0748081 | 75MM | 0.127MM | 58M | 5KG |
| 0748082 | 75MM | 0.127MM | 116M | 10KG |
| 0748084 | 75MM | 0.127MM | 290M | 25KG |
| 0748085 | 100MM | 0.127MM | 44M | 5KG |
| 0748086 | 100MM | 0.127MM | 88M | 10KG |
| 0748087 | 100MM | 0.127MM | 219M | 25KG |
| 0748088 | 200MM | 0.127MM | 22M | 5KG |
| 0748089 | 200MM | 0.127MM | 44M | 10KG |
| **RS Code** | **Width** | **Thickness/Guage** | **Length** | **Weight** |
| 0748090 | 200MM | 0.127MM | 109M | 25KG |
| 0748091 | 25MM | 0.2MM | 111M | 5KG |
| 0748092 | 25MM | 0.2MM | 222M | 10KG |
| 0748093 | 25MM | 0.2MM | 558M | 25KG |
| 0748094 | 50MM | 0.2MM | 56M | 5KG |
| 0748095 | 50MM | 0.2MM | 112M | 10KG |
| 0748096 | 50MM | 0.2MM | 279M | 25KG |

# Copper Coils

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|---|---|---|---|---|
| 0748097 | 75MM | 0.2MM | 37M | 5KG |
| 0748098 | 75MM | 0.2MM | 74M | 10KG |
| 0748100 | 75MM | 0.2MM | 186M | 25KG |
| 0748157 | 100MM | 0.2MM | 28M | 5KG |
| 0748158 | 100MM | 0.2MM | 56M | 10KG |
| 0748159 | 100MM | 0.2MM | 140M | 25KG |
| 0748160 | 200MM | 0.2MM | 14M | 5KG |
| 0748161 | 200MM | 0.2MM | 28M | 10KG |
| 0748163 | 200MM | 0.2MM | 70M | 25KG |
| 0748164 | 25MM | 0.25MM | 89M | 5KG |
| 0748165 | 25MM | 0.25MM | 178M | 10KG |
| 0748166 | 25MM | 0.25MM | 446M | 25KG |
| 0748167 | 50MM | 0.25MM | 45M | 5KG |
| 0748168 | 50MM | 0.25MM | 90M | 10KG |
| 0748169 | 50MM | 0.25MM | 223M | 25KG |
| 0748170 | 75MM | 0.25MM | 30M | 5KG |
| 0748171 | 75MM | 0.25MM | 60M | 10KG |
| 0748172 | 75MM | 0.25MM | 149M | 25KG |
| 0748173 | 100MM | 0.25MM | 22M | 5KG |
| 0748174 | 100MM | 0.25MM | 44M | 10KG |
| 0748175 | 100MM | 0.25MM | 112M | 25KG |
| 0748176 | 200MM | 0.25MM | 11M | 5KG |
| 0748177 | 200MM | 0.25MM | 22M | 10KG |
| 0748179 | 200MM | 0.25MM | 28M | 25KG |
| 0748180 | 25MM | 0.3MM | 74M | 5KG |
| 0748181 | 25MM | 0.3MM | 148M | 10KG |
| 0748182 | 25MM | 0.3MM | 372M | 25KG |
| 0748183 | 50MM | 0.3MM | 37M | 5KG |
| 0748185 | 50MM | 0.3MM | 74M | 10KG |
| 0748186 | 50MM | 0.3MM | 186M | 25KG |
| 0748187 | 75MM | 0.3MM | 25M | 5KG |
| 0748188 | 75MM | 0.3MM | 50M | 10KG |
| 0748189 | 75MM | 0.3MM | 124M | 25KG |
| 0748101 | 100MM | 0.3MM | 19M | 5KG |
| **RS Code** | **Width** | **Thickness/Guage** | **Length** | **Weight** |
| 0748102 | 100MM | 0.3MM | 38M | 10KG |
| 0748103 | 100MM | 0.3MM | 93M | 25KG |
| 0748104 | 200MM | 0.3MM | 9M | 5KG |
| 0748105 | 200MM | 0.3MM | 18M | 10KG |
| 0748107 | 200MM | 0.3MM | 47M | 25KG |
| 0748108 | 25MM | 0.4MM | 56M | 5KG |
| 0748109 | 25MM | 0.4MM | 112M | 10KG |

# Copper Coils

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|---|---|---|---|---|
| 0748110 | 25MM | 0.4MM | 2799M | 25KG |
| 0748111 | 50MM | 0.4MM | 28M | 5KG |
| 0748113 | 50MM | 0.4MM | 56M | 10KG |
| 0748114 | 50MM | 0.4MM | 140M | 25KG |
| 0748115 | 75MM | 0.4MM | 19M | 5KG |
| 0748116 | 75MM | 0.4MM | 38M | 10KG |
| 0748117 | 75MM | 0.4MM | 93M | 25KG |
| 0748118 | 100MM | 0.4MM | 14M | 5KG |
| 0748119 | 100MM | 0.4MM | 28M | 10KG |
| 0748120 | 100MM | 0.4MM | 70M | 25KG |
| 0748121 | 200MM | 0.4MM | 7M | 5KG |
| 0748122 | 200MM | 0.4MM | 14M | 10KG |
| 0748123 | 200MM | 0.4MM | 35M | 25KG |