



## 3200 Series - Mu-copper tape



Many EMI problems can be solved easily with [Mu-copper foil](#) or tape. Mu-copper tape is available with or without (conductive) self-adhesive and an optional insulation layer.

Mu-copper tape can be cut to any width starting at 3 mm and can be delivered from stock. The most commonly used width is 25 mm; standard roll length is 16.5 meters.

When large surfaces are to be shielded, it is recommended to cover most of the surface with [Mu-copper foil](#), possibly in combination with tape with a conductive self-adhesive. This solution is much cheaper than covering the entire surface with tape strips.

Mu-copper tape can also be delivered as die-cut, according to your drawing, on strips or in pieces (as stickers), with optional self-adhesive. Almost every shape and size is possible.

### Shielding effectiveness

There are many factors that influence the actual effectiveness of an EMI/RFI shielding tape after it has been applied, such as the type and thickness of foil, type of adhesive, closeness of contact, smoothness of application surface, strength and frequency of the EMI/RFI signal, etc. Still, attenuation values can be determined using standard tests and fixtures.

For EMI/RFI shielding tape, typical shielding effectiveness (far field) is in the range of 60dB to 80dB (10 KHz to 20 GHz). For more specifications see table and graph below.

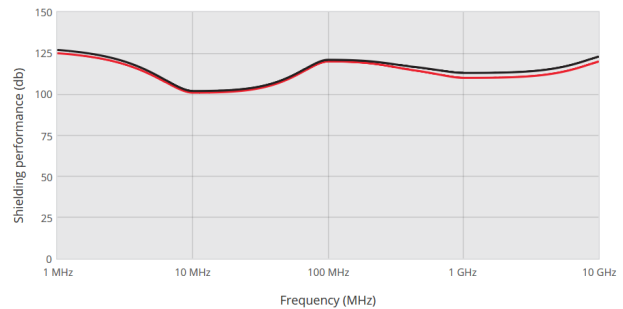
Field	Frequency	Mu-copper	
		0.12 mm thick	0.18 mm thick
E	1 MHz	125 dB	127 dB
E	10 MHz	101 dB	102 dB
E	100 MHz	120 dB	121 dB
E	400 MHz	115 dB	117 dB
P	1 GHz	110 dB	113 dB
P	10 GHz	120 dB	123 dB

These values are measured under laboratory conditions. Results may differ in other situations. Please read our [Guarantee](#).

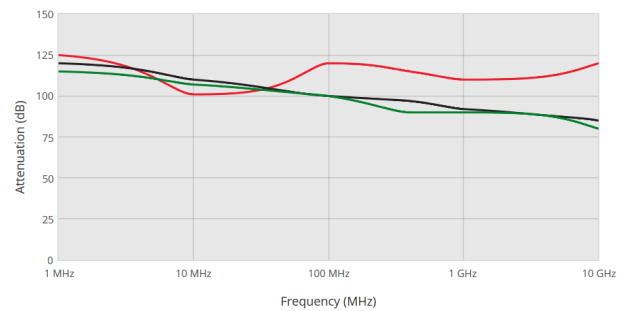
### Applications

- EMI shielding of plastic enclosure parts
- EMI shielding tape/gasket
- Shielding of all non-conductive materials
- Ground plane
- Antistatic floors (ESD floors)
- Electrical connection between surfaces
- Shielding in housings and Faraday cages
- Temporary shielding during tests
- Mounting transparent foils, windows for EMI/RFI shielding
- Cable shielding (tape wrapped around cable)
- Temporary shielding during emissions and immunity tests

### Mu-copper foil 0.12 vs 0.18 mm thickness



### 3200 series - Mu-copper tape vs other tapes



- Mu-copper foil (0.12 mm thickness)
- Amucor foil
- Conductive textile

**Please note:** These values are measured under laboratory conditions. Results may differ in other situations. Please read our [Guarantee](#)

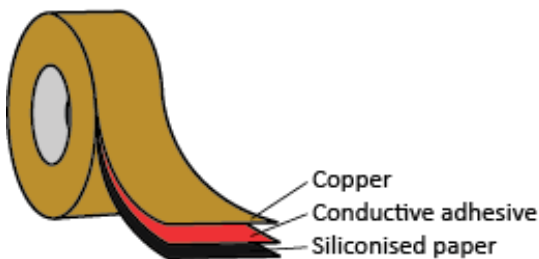
## 3200 Series - Mu-copper tape

### 3201, 3212 & 3218 Copper tape with conductive adhesive

A flexible metal foil with a highly conductive self-adhesive on one side, with a release liner.

- Conductive acrylic adhesive
- Supplied on a removable liner for easy handling and die-cutting

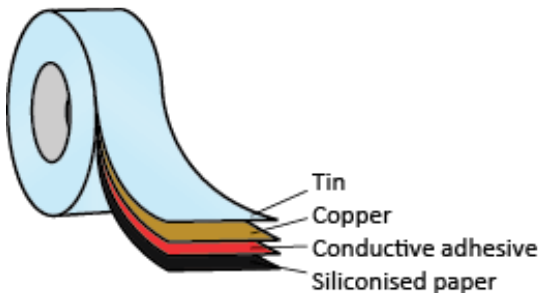
Like all Holland Shielding System BV tapes, Copper tape 3201 is available in standard and custom widths and lengths. The standard length is 16.5 meters.



Standard thickness for this tape:

- 0.035 mm (part no. 3201)
- 0.12 mm (part no. 3212)
- 0.18 mm (part no. 3218)
- Other on request

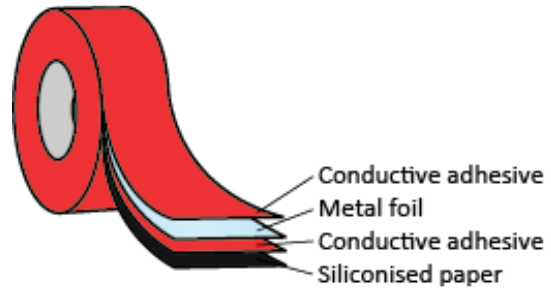
### 3202 Tinned copper tape



Similar to Tape 3201, but with a layer of tin added for protection against corrosion and better solderability.

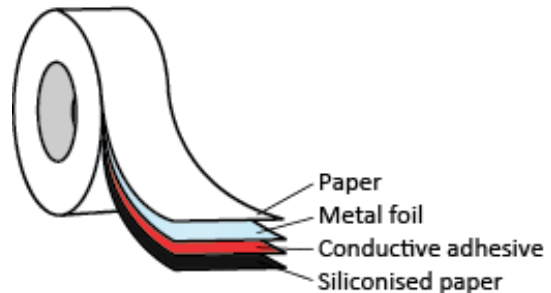
### 3206 Die-cut mounting tape / Sandwich copper tape

A flexible metal foil, laminated on 2 sides with a conductive self-adhesive; available in sheets and rolls.



For more specifications see "Technical specification" table below.

### 3207 Copper tape with paper insulation



Similar to Tape 3201, but with a paper layer added to insulate the top layer of copper.

- Thickness of the copper is 0.035 mm
- Thickness of the paper insulation layer is 0.5 mm
- Available up to a width of 1500 mm



## 3200 Series - Mu-copper tape

### Technical specification and part numbers

Part number (with conductive adhesive)	3201 (0.035 mm thick), 3212 (0.12 mm thick), 3218 (0.18 mm thick)	3202	3206	3207
Part number (with standard adhesive)	3301	3302	3306	3307
Construction				
Foil material	soft copper	soft copper	soft copper	soft copper with paper
Surface	shiny	tinned	-	bright
Foil thickness	0.035 mm	0.035 mm	0.035 mm	0.035 mm
Total thickness	0.060 mm	0.060 mm	0.085 mm	0.060 mm
Adhesive	synthetic conductive resin	synthetic conductive resin	synthetic conductive resin	synthetic conductive resin
Adhesive performance	4.5 N/cm	4.5 N/cm	4.5 N/cm	4.5 N/cm
Tensile strength	55 N/cm	40 N/cm	55 N/cm	55 N/cm
Temperature resistance	155 °C	155 °C	155 °C	-
El. resistance through adhesive	0.003 Ohms	0.003 Ohms	0.003 Ohms	0.003 Ohms
Standard roll widths (mm)*	10, 25, 50, 100	10, 25, 50, 100	10, 25, 50, 100	10, 25, 50, 100
Roll lengths*	16.5 m	16.5 m	16.5 m	16.5 m

Please note: These values are measured under laboratory conditions. Results may differ in other situations. Please read our [Guarantee](#).

\*Other roll widths / lengths on request

### How to order

When you want to order the Mu-copper tape please specify the following:

Part number	Width (mm)	Length (mm)
<b>3600</b>	<b>50</b>	<b>1000</b>
3201 : 0.035 mm thick Copper tape with conductive adhesive 3212 : 0.12 mm thick Copper tape with conductive adhesive 3218 : 0.18 mm thick Copper tape with conductive adhesive 3202 : Tinned Copper tape with conductive adhesive 3206 : Sandwich copper tape with conductive adhesive 3207 : Copper tape with paper insulation	Specify the width in mm	Specify the length in meters