



ASSOCIATION CONNECTING
ELECTRONICS INDUSTRIES

IPC-CF-148A

Resin Coated Metal Foil
for Printed Boards

ANSI/IPC-CF-148A

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A standard developed by IPC

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Resin Coated Metal Foil for Printed Boards

1 SCOPE

This document establishes the requirements for metal foils coated with a resin or a composite of resins on one side, which are to be used for the fabrication of printed boards. Unless otherwise agreed upon between user and supplier, resin coated metal foils **shall** be considered acceptable if the requirements in this document are met.

1.1 Classification The following system identifies resin coated metal foil used in printed wiring applications only.

- IPC-CF-148A** Where S is specification sheet number
- C** Metal Foil Type (see 1.1.2)
 - 17** Metal Foil Thickness (see 1.1.3.1)
 - A/E** Resin Types (see 1.1.4)
 - 25** First Resin Thickness (see 1.1.5)
 - 25** Second Resin Thickness (see 1.1.6)
 - 1** Classification (see 1.2)

1.1.1 Specification Sheet Description At the end of this document is a series of specification sheets. Each specification sheet outlines engineering and performance data for resin coated metal foil, indicating foil material type and resin type. The specification sheets are provided with numbers for ordering purposes. For example, if a user wishes to order from specification sheet number 1, the number “1” would be substituted for the “S” in the above designation example (IPC-CF-148/1).

Users and material developers are encouraged to supply information on new coated materials for review by the IPC-CF-148 Task Group (3-12c). Users who wish to invoke this specification for coated foil not listed **shall** list a zero for the specification sheet number (IPC-CF-148/0).

This specification provides quality classes (see 1.2) for requirements to reflect functional performance and testing properties. The reference of a single class does not preclude invoking specific requirements defined in other classes.

1.1.2 Foil Metal The metal foil **shall** be designated by a letter code from Table 1-1.

1.1.3 Foil Thickness The metal foil **shall** be specified to the nearest μm . See Table 1-2 for the equivalent copper weights.

Table 1-1 Metal Foil Types

A	Copper, wrought, rolled (IPC-MF-150, Grade 5)
B	Copper, rolled (treated)
C	Copper, electrodeposited (IPC-MF-150, Grade 1)
D	Copper, electrodeposited, double treat (IPC-MF-150, Grade 1)
G	Copper, electrodeposited, high ductility (IPC-MF-150, Grade 2)
H	Copper, electrodeposited, high temperature elongation (IPC-MF-150, Grade 3)
J	Copper, electrodeposited, annealed (IPC-MF-150, Grade 4)
K	Copper, wrought, light cold rolled (IPC-MF-150, Grade 6)
L	Copper, wrought, annealed (IPC-MF-150, Grade 7)
M	Copper, wrought, rolled, low temperature annealable (IPC-MF-150, Grade 8)
P	Copper, electrodeposited, high temperature elongation, double treat (IPC-MF-150, Grade 3)
R	Copper, reverse treated electrodeposited (IPC-MF-150, Grade 1)
S	Copper, reverse treated electrodeposited, high temperature elongation (IPC-MF-150)
T	Copper, copper foil parameters as dictated by contract or purchase order
U	Aluminum
Y	Copper/Invar/Copper
N	Nickel
X	Other, as agreed upon between user and supplier

Table 1-2 Copper Weight Equivalents

Nominal Thickness (μm)	Area Weight (g/m^2)
5	45.1
9	75.9
12	106.8
17	152.5
25	228.8
35	305.0
70	610.0
103	915.0
137	1220.0
172	1525.0
205	1830.0
240	2135.0
343	3050.0
480	4270.0