ASSOCIATION CONNECTING
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IPC-MF-150F

Metal Foil for Printed Wiring Applications

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Metal Foil for Printed Wiring Applications

1.0 SCOPE

This specification covers monolithic metal foils, either supported by carrier films or foils, or unsupported, suitable for subsequent use in printed boards. Unless otherwise agreed to between vendor and user, metal foils shall be considered acceptable if the requirements in this document are met.

1.1 Purpose This specification addresses the requirements for procurement of metal foil used in printed wiring application only.

1.2 Foil Designation The foil designation shall be in the following forms:

IPC-MF-150/X	**Cu**	**E**	**4-**
Where X is the specification sheet number (See 1.2.1)	Foil Metal (See 1.2.2)	Foil Type (See 1.2.3)	Foil Grade (See 1.2.4)
2	**B**	**S**	**2**
Foil Thickness (See 1.2.5)	Bond Enhancement Treatment (See 1.2.6)	Foil Profile (See 1.2.7)	Quality Classification (See 1 .3)

1.2.1 Specification Sheet Description At the end of this document is a series of specification sheets. Each sheet outlines engineering and performance data for a metal foil. The sheets are provided with a number for ordering purposes. For example, if a user wished to order from specification sheet number 1, the number ''1'' would be substituted for the ''X'' in the above designation example (e.g., IPC-MF-150/1).

The metal foils contained in this standard represent known materials. As new foils become available, they will be added to future revisions. Users and material developers are encouraged to supply information on new materials for review by the IPC Metallic Foil Subcommittee. Users who wish to invoke this specification for metal foils not listed shall list a zero (0) for the specification sheet number (e.g., IPC-MF-150/0).

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

1.2.2 Foil Metal The foil metal shall be designated by a suitable two or three letter code:

CU — Copper

NI — Nickel

XX — Other

1.2.3 Foil Type Metal foil types shall be distinguished by their process of manufacture and shall be designated:

E — Electrodeposited

W — Wrought (rolled)

O — Other

1.2.4 Foil Grade

1.2.4.1 Copper Foil Grades Copper foil grades shall be distinguished according to the following copper foil grade designations:

1. Standard electrodeposited (STD-Type E)
2. High ductility electrodeposited (HD-Type E)
3. High temperature elongation electrodeposited (HTE-Type E)
4. Annealed electrodeposited (ANN-Type E)
5. As rolled-wrought (AR-Type W)
6. Light cold rolled-wrought (LCR-Type W)
7. Annealed-wrought (ANN-Type W)
8. As rolled-wrought low-temperature annealable (LTA-Type-W)

1.2.4.2 Other Metal Foil Grades Other metal foil grades will be designated as the need arises.

1.2.5 Foil Thickness

1.2.5.1 Copper Foil Area Weight For copper, the nominal thickness shall be indicated in g/m^2 [$oz./ft^2$]. The copper weight designation shall be identified as given in Table 1.

1.2.5.2 Thickness of Foils Other than Copper Thickness of all other metals shall be indicated by dimensions to the nearest 0.025 mm [0.001 in].

1.2.6 Bond Enhancement Treatment The bond enhancement treatment used on the metal foil shall be designated in the following manner.

N — No treatment, no stain proofing

P — No treatment, with stain proofing both sides