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IPC-4203C

Cover and Bonding Material for Flexible Printed Circuitry

Developed by the D-13 Flex Materials Subcommittee of
D-10 Flexible Circuits General Committee of IPC.

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Table of Contents

1	SCOPE.....	1	3	REQUIREMENTS.....	6
1.1	Purpose	1	3.1.1	Qualification Testing	6
1.2	Classification System	1	3.2	Quality Conformance Testing	6
1.2.1	Nonspecific Designation	1	3.3	User Inspection Lot	6
1.2.2	Specific Designation	1	3.4	Supplier Inspection Lot	6
1.2.2.1	Base Dielectric Material Type	1	3.5	Structurally Similar Construction	6
1.2.2.2	Reinforcement Method	2	3.6	Specification Sheets	6
1.2.2.3	Reinforcement Type	2	3.7	Materials	6
1.2.2.4	Base Dielectric Material Thickness	2	3.7.1	Base Material	6
1.2.2.5	Adhesive Type	3	3.7.2	Adhesive	6
1.2.2.6	Adhesive Thickness	3	3.7.3	Sheet Material	6
1.3	Qualification	3	3.7.4	Roll Material	7
1.4	Quality Conformance	3	3.8	Visual Requirements	7
1.5	Material Characteristics	3	3.8.1	Marking	7
1.6	New Materials	4	3.8.2	Wrinkles, Creases, Streaks and Scratches	7
1.7	Measurement Units	4	3.8.3	Inclusions	7
1.8	Definition of Requirements	4	3.8.4	Voids	7
1.9	Process Control Requirements	4	3.8.5	Holes, Tears and Delaminations	7
1.10	Order of Precedence	4	3.9	Dimensional Requirements	7
1.10.1	Conflict	4	3.9.1	Sheet Width and Length	7
1.10.2	Clause References	4	3.9.2	Roll Width	7
1.10.3	Appendices	4	3.9.3	Roll Length	7
1.10.3.1	Appendix A	4	3.9.4	Dielectric Thickness	7
1.11	Use of “Lead”	4	3.9.5	Adhesive Thickness	8
1.12	Abbreviations and Acronyms	4	3.10	Physical Requirements	8
1.13	Terms and Definitions	5	3.10.1	Dimensional Stability	8
1.13.1	Void	5	3.10.2	Peel Strength	8
1.13.2	Inclusions	5	3.10.2.1	Peel Strength As Received	8
1.13.3	Cover Material	5	3.10.2.2	Peel Strength After Solder Float	8
1.13.3.1	Coverlay	5	3.10.2.3	Peel Strength After Temperature Cycling	8
1.13.3.2	Coverfilm	5	3.10.3	Flow	8
1.13.3.3	Covercoat	5	3.10.4	Volatile Content	8
1.13.4	Bonding Material	5	3.11	Chemical Requirements	8
2	APPLICABLE DOCUMENTS.....	5	3.11.1	Chemical Resistance	8
2.1	IPC.....	5	3.11.2	Solder Float	8
2.2	2.2 ASTM International.....	6	3.12	Electrical Requirements	8
2.3	Underwriters Laboratories Standards.....	6	3.12.1	Permittivity (Dielectric Constant)	9
2.4	ISO	6	3.12.2	Loss Tangent (Dissipation Factor)	9

3.12.3	Volume Resistivity (Damp Heat)	9	4.9.4	Group C Inspection	13
3.12.4	Surface Resistance (Damp Heat)	9	4.9.4.1	Sampling Plan	13
3.12.5	Dielectric Strength	9	4.9.4.2	Failures	13
3.13	Environmental Requirements	9	4.9.4.3	Noncompliance of Material	14
3.13.1	Fungus Resistance	9	4.10	Statistical Process Control (SPC)	15
3.13.2	Moisture Absorption	9	4.10.1	Reduction of Quality Conformance Testing ..	15
3.13.3	Flammability	9	4.11	Change Notification and Authorization	15
3.13.4	Service Temperature	9	4.12	Certificate of Conformance	15
3.13.5	Moisture and Insulation Resistance	10	5	PREPARATION FOR DELIVERY	16
3.14	Workmanship	10	5.1	Packaging	16
4	QUALITY ASSURANCE PROVISIONS	10	6	NOTES	16
4.1	Responsibility for Inspection	10	6.1	Ordering Data	16
4.2	Test Equipment and Inspection	10	6.2	Specific Chemical Exposure	16
4.3	Preparation of Test Samples	10	6.3	Storage/Shelf Life	16
4.3.1	Preparation of Cover Material Test Samples..	10			
4.3.1.1	Cover Material – General Testing	10			
4.3.1.2	Cover Material – Peel Testing	10			
4.3.2	Preparation of Supported Bonding Material Test Samples.....	11			
4.3.2.1	Supported Bonding Material – General Testing	11			
4.3.2.2	Supported Bonding Material - Peel Testing ...	11			
4.4.	Standard Laboratory Conditions	12			
4.5	Tolerances	12			
4.6	Classification of Inspections	12			
4.7	Materials Inspection	12			
4.8	Qualification Inspection	12			
4.8.1	Characterization Testing	12			
4.8.2	Frequency	12			
4.9	Quality Conformance Inspection	12			
4.9.1	Inspection of Product for Delivery	13			
4.9.2	Group A Inspection.....	13			
4.9.2.1	Sampling Plan	13			
4.9.2.2	Failures	13			
4.9.2.3	User Sampling Plan	13			
4.9.2.4	Rejected Lots	13			
4.9.3	Group B Inspection	13			
4.9.3.1	Sampling Plan	13			
4.9.3.2	Failures	13			
4.9.3.3	Noncompliance of Material	13			

Tables

Table 1-1	Base Dielectric Type Designation.....	2
Table 1-2	Reinforcement Method Designation.....	2
Table 1-3	Reinforcement Type Designation	2
Table 1-4	Base Dielectric Thickness or Adhesive Thickness Designation.....	3
Table 1-5	Adhesive Type Designation	3
Table 3-1	Allowable Deviation from Nominal Thickness of Base Dielectric	8
Table 3-2	Allowable Deviation from Nominal Thickness of Adhesive.....	8
Table 4-1	Cleaning Process for Shiny Copper	12
Table 4-2	Test Method Frequency	14
Table 4-3	Sampling Plan for Group A and Group B Inspection for Sheet Goods.....	14
Table 4-4	Sampling Plan for Group A and Group B Inspection for Roll Goods.....	14

Cover and Bonding Material for Flexible Printed Circuitry

1 SCOPE

This standard establishes the classification system, the qualification and quality conformance requirements for dielectric films coated with an adhesive on one or both sides, which are to be used as cover material and/or bondply for flexible printed circuitry, and supported or unsupported adhesive films to be used in the fabrication of flexible printed circuitry.

1.1 Purpose This specification addresses the requirements for procurement of dielectric films coated with an adhesive on one or both sides flexible printed board applications.

1.2 Classification System The system described in 1.1.1 through 1.1.2.6 identifies adhesive coated dielectric films and flexible adhesive bonding films.

1.2.1 Nonspecific Designation A nonspecific designation is intended for use by designers on master drawings to designate their material choice. Further specification details may be indicated by using the specific designation in drawing notes and purchase documents. At the end of this standard is a series of material specification sheets designated by individual nonspecific designators. Each sheet outlines engineering and performance data for a flexible cover sheet and bonding film indicating base material type, adhesive type and method of reinforcement. The sheets are provided with a number 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 designation example (i.e., IPC-4203/1).

Example of nonspecific designation: IPC-4203/S Where S is specification sheet number.

1.2.2 Specific Designation The specific designation should be as shown in the following example and is intended for use on purchase orders (see 6.1). The specific designation should not be used by designers on master drawings to indicate their material selection. Master drawings **shall** indicate the material design by the nonspecific designation, supplemented in notes with the material specification details as defined by the specific designation. This procedure is necessary because the specific designation is normally lengthy and will not fit the field for most computer cataloging.

NOTE: The alpha character "Z" replaces and is entirely equivalent to both the alpha character "N" (ref: Table 1-1) and the alpha character "N" (ref: Table 1-3) in the previous revision of this IPC standard. This interchange of alpha characters within the designation will help to alleviate confusion from using the alpha character "N" in both Tables 1-1 and 1-3 while retaining "N" in Table 1-5, Adhesive Type Designation, where "N" designates a Polyester Adhesive Type. Legacy designs that utilize a designation and material description from the original release of this IPC standard [alpha character "O" (from Table 1-1) and/or digit "0" (from Table 1-3)] may continue to be used. Supplier material certifications will reflect the current IPC standard's revision, and accordingly, the alpha character "Z" in the designation.

Example of specific designation: **IPC-4203/S - C1E2M3/3**

Where:

IPC-4203/S - Nonspecific Designation (see 1.2.1)

C - Base Dielectric Type Designation (see 1.2.2.1)

1 - Reinforcement Method Designation (see 1.2.2.2)

E - Reinforcement Type Designation (see 1.2.2.3)

2 - Base Dielectric Thickness Designation (see 1.2.2.4)

M - Adhesive Type Designation (see 1.2.2.5)

3/3 - Adhesive Thickness Designation (see 1.2.2.6)

Note: The letter “X” **shall** be entered into the designation where an item is not specified (e.g., dielectric thickness).

1.2.2.1 Base Dielectric Material Type The type of dielectric material **shall** be specified per Table 1-1.