IPC-4203A

2013 - January

Cover and Bonding Material for Flexible Printed Circuitry

Supersedes IPC-4203
May 2002

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Cover and Bonding Material for Flexible Printed Circuitry

Developed by the Flexible Circuits Base Materials Subcommittee (D-13) of the Flexible Circuits Committee (D-10) of IPC

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Users of this standard are encouraged to participate in the development of future revisions.

Contact:

IPC
3000 Lakeside Drive, Suite 309S
Bannockburn, Illinois
60015-1249
Tel 847 615.7100
Fax 847 615.7105

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Flexible Circuits Committee

Chair
Thomas F. Gardeski
Gemini Sciences

Vice Chair
Nick S. Koop
Minco Products Inc.

Flexible Circuits Base Materials Subcommittee

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Clark F. Webster
ALL Flex LLC

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Michael Beauchesne
Amphenol Printed Circuits, Inc.

Technical Liaison of the IPC Board of Directors

Bob Neves
Microtek Laboratories

Dongkai Shangguan
Flextronics International

Flexible Circuits Base Materials Subcommittee

Takahisa Akatsuka, Nippon Mektron Ltd.

Alisha Amar, Lockheed Martin Space Systems Co.

Diane Andercyk, Trace Laboratories - Baltimore

Masamitsu (Matt) Aoki, JETPA

Lance Auer, Raytheon Missile Systems

Richard Barnett, Hewlett-Packard Co.

John Bauer, Rockwell Collins

Roger Bell, Space Systems / Loral

Mary Belton, Boeing Research and Development

Dr. Tad Bergstresser, Bekaert Specialty Films LLC

Robert Black, Northrop Grumman Corp.

Scott Bowles, L-3 Fuzing and Ordinance Systems

Tracy Cai, Shengyi Technology Co. Ltd.

Rodd Cairns, Starkey Laboratories, Inc.

Byron Case, L-3 Communications

Sharon Chaput, Raytheon Missile Systems

Dr. Wennei Chen, Northrop Grumman Aerospace Systems

Jeffrey Ciesla, Defense Supply Center Columbus

Greg Clements, Kaneka North America LLC

Christine Coapman, C2 Consulting

David Corbett, Defense Supply Center Columbus

Andrea Cote, UL LLC

Michelle Courier, UL LLC

Dr. G. Sidney Cox, DuPont

Arthur Creidler, DuPont

Michael Crutchfield, DuPont

Jay Desai, UFLEX

Peter DeWeese, UL LLC

Michael Dickson, UL LLC

Joseph DiPalermo, M-Flex/Pica Sales & Engineering

Mitsuharu Douwaki, Fujikura Ltd.

Russell Dudek, Compunetics Inc.

C. Don Dupriest, Lockheed Martin Missiles & Fire Control

Jim Edmonds, Shin-Etsu MicroSi

Theodore Edwards

Alan Exley, Raytheon Company

Thomas Farrell, Thomas G. Farrell Associates

David Fellows, Medtronic Microelectronics Center

Jason Ferguson, NSWC Crane

Mark Finstad, Flexible Circuit Technologies, Inc.

Terry Fischer, Hitachi Chemical Co. America, Inc.

Thomas Fisher, DuPont

Lionel Fullwood, WKK Distribution Ltd.

Mahendra Gandhi, Northrop Grumman Aerospace Systems

Thomas Gardeski, Gemini Sciences, LLC

Donna Gardner, DuPont

Marc Goudreau, Vulcan Flex Circuit Corp.

Ty Gregg, Unicircuit Inc.

Michael Green, Lockheed Martin Space Systems Co.

Russell Griffith, Flexible Circuits Inc.

Rachel Hawkins, Rockwell Collins

William Hazen, Raytheon Company

Todd Henninger, Viasystems North America, Inc.

Scott Herrmann, DuPont

Rocky Hilburn, Inselectro

William Jacobi, William Jacobi & Associates

Michael Jawitz, Boeing Research & Development

Tamotsu Kitagawa, ABC Corporation

Nick Koop, Minco Products, Inc.

Toshiaki Kuroiwa, UBE

Karin Laberge, Microtek Laboratories

Thomas Lantzer, DuPont

John Leschisin, Minco Products, Inc.

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Dr. Yanmei Li, Schlumberger Well Services

Anne Lomonte, Draeger Medical Systems, Inc.

Duane Mahnke, DBMahnke Consulting

Kenneth Manning, Raytheon Company

John Marke, UL LLC

Martha Martinez, UL LLC

Eric Matuska, ALL Flex LLC

Dr. Thomas McCarthy, Taconic Advanced Dielectric Division

David McGregor, DuPont

Peter Menuez, L-3 Communications - Cincinnati Electronics

Roger Meidico, Raytheon Company

Steve Morton, Exopack Advanced Coatings

Steve Musante, Raytheon Missile Systems

Robert Neves, Microtek (Changzhou) Laboratories

Steven Nolan, Lockheed Martin Maritime Systems & Sensors

Dominique Numakura, DKN Research

Debora Obitz, Trace Laboratories - Baltimore

Yuri Okazaki, Toray

William Ortloff, Raytheon Company

Dr. J. Lee Parker, JLP

Dr. Arvind Partha, Somers Thin Strip

Joel Peiffer, 3M Company

Anthony Plemel, PFC Flexible Circuits Ltd.

John Potenza, Lockheed Martin Mission Systems & Training

Jim Ryan, Integral Technology

Mathew Saari, Multek Flexible Circuits, Inc.

Sakaguchi, Shin-Etsu Chemical Co. Ltd.

Dr. Jerome Sallo, Sallo Consulting Services

Edward Sandor, Taconic Advanced Dielectric Division

Kenji Sasahara, Kyosha Company, Ltd.

Takeshi Sasaki, Nippon Steel Chemical Company

Sie Sauers, GE Medical Systems LLC

Rolland Savage, High Performance Copper Foil Inc.

Charles Schamberg, Raytheon Missile Systems

Dr. Michael Schen, NIST

Joseph Schmidt, Raytheon Missile Systems

Julie Scopel, UL LLC

Gilbert Shelby, Raytheon Systems Company

Robert Sheldon, Pioneer Circuits Inc.

Terry Shepler, Electro-Materials, Inc.

Lowell Sherman, Defense Supply Center Columbus

HyunJoon Shin, UL Korea Ltd.

Caroline Simonian-Owens, UL LLC

William Slough, Multek Flexible Circuits, Inc.

Douglas Sober, Shengyi Technology Co. Ltd.

Vern Solberg, Solberg Technical Consulting

Valarie St. Cyr, Teradyne Inc.

Herb Stark, Flexible Circuits Inc.

Rebecca Steinbauer, ALL Flex LLC

Darin Stotz, Northfield Automation Systems Inc.

Brent Sweitzer, Multek Flexible Circuits, Inc.

Dung (Young) Tiet, Lockheed Martin Space Systems Co.

John Tobin, UL LLC

Randy Tolbert, NSWC Crane

Crystal Vanderpan, UL LLC

Steve Vetter, NSWC Crane

Nicholas Watts, Intel Corporation

Vern Weik, Molex Copper Flex Products

Kurt Whitcomb, Amphenol Printed Circuits, Inc.

Dewey Whittaker, Honeywell Inc. Air Transport Systems

Jay Wu, Taiflex Scientific Co., Ltd.

Katsuya Yamada, Sumitomo Electric Printed Circuits Inc.

Miou Yamaoka, Meiko Electronics Co. Ltd.

Ricky Yeung, TTM Asia Pacific

Dr. George Zahr, Dupont

Sarah Zarrin, Seagate Technology

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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 for flexible printed circuitry as well as supported or unsupported adhesive films to be used in the fabrication of flexible printed circuitry. It does not cover non-flexible adhesives designed to be used in the rigid board areas of rigid flex constructions which are covered in IPC-4101. Materials such as liquid-applied covercoat (see 3.1.8.3) are covered in IPC-SM-840 and are excluded from this document.

This specification supersedes both IPC-FC-232C and IPC-FC-233A and the requirements herein meet or exceed the requirements for Class 3 in these superseded documents. Note that conformance to Class 3 meets or exceeds conformance to Classes 1 and 2. IPC-4203 no longer utilizes the 3-class system.

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

1.1.1 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.*

1.1.2 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 ''N'' replaces and is entirely equivalent to both the alpha character ''O'' (ref: Table 1-1) and the digit ''0'' (ref: Table 1-3) in the original release (prior revision) of this IPC standard. This interchange of characters within the designation will help alleviate confusion from using both the alpha character ''O'' and the digit ''0'' from the original release of this IPC standard. 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 ''N,'' in the designation.

Example of specific designation: *IPC-4203/S - C1E2M3/3*
Where:
IPC-4203/S - Nonspecific Designation (see 1.1.1)
C - Base Dielectric Type Designation (see 1.1.2.1)
1 - Reinforcement Method Designation (see 1.1.2.2)
E - Reinforcement Type Designation (see 1.1.2.3)
2 - Base Dielectric Thickness Designation (see 1.1.2.4)
M - Adhesive Type Designation (see 1.1.2.5)
3/3 - Adhesive Thickness Designation (see 1.1.2.6)

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

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