IPC-4412B

Specification for Finished Fabric Woven from “E” Glass for Printed Boards

Developed by the Woven Glass Reinforcement Task Group (3-12d) of the Printed Board Base Materials Committee (3-10) of IPC

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

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5 PREPARATION FOR DELIVERY .................................................. 9
  5.1 Preservation and Packaging ................................................. 9
  5.2 Packing ........................................................................... 9
  5.3 Marking ............................................................................ 9

6 NOTES ................................................................................. 10
  6.1 Ordering Data ................................................................. 10
  6.2 New Styles ....................................................................... 10

Appendix I ............................................................................ 11

Appendix II Finished Fabric Glass Styles
  SI Units .................................................................................. 13

Appendix II Finished Fabric Glass Styles
  US System ............................................................................... 16

Tables
  Table 3-1 Classification of Defects ........................................... 4
  Table 3-2 Filament Diameter Designations ............................... 5
  Table 3-3 Bare Glass Nominal Measurements ........................... 5
  Table 4-1 Sample Size per Number of Rolls Shipped ............. 7
  Table 4-2 Sample Size per Yardage of Individual Roll Shipped and the Acceptable Quality Level .............................................................. 7
  Table AI-1 Cross Reference Between IPC-4412, Standards Called Out by IPC-4412, and ISO Documents .................................................. 11
  Table AI-2 Cross Reference Between IPC-4412, ASTM and ISO Documents ................................................................. 12
  Table AII-1 Finished Fabric Glass Styles in SI Units .............. 13
  Table AII-2 Finished Fabric Glass Styles for US System .... 16
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1 SCOPE
This specification covers finished fabrics woven from “E” glass electrical grade glass fiber yarns that are intended as a reinforcing material in laminated plastics for electrical and electronic use. All fabrics covered by this specification are plain weave.

1.2 Purpose This specification determines the nomenclature, definitions, general and chemical requirements for the glass, and physical requirements for finished woven glass fiber fabrics.

1.3 Designation Appendix II of this standard provides a style designator for each finished fabric glass style, with specifications on yarn, fabric count, thickness and weight in both SI and US system. Fabrics listed in Appendix II also categorize fabrics by their current availability status.

2 APPLICABLE DOCUMENTS

2.1 IPC1
IPC-T-50 Terms and Definitions for Interconnecting and Packaging Electronic Circuits
IPC-9191 General Guidelines for Implementation of Statistical Process Control (SPC)

2.2 American Society for Testing and Materials (ASTM)2
ASTM D578 Standard Specification for Glass Fiber Strands
ASTM D579 Standard Specification for Greige Woven Glass Fabrics
ASTM D1776 Standard Practice for Conditioning Testing Textiles

2.3 International Standards3
ISO 9001 Quality Management Systems - Requirements

2.4 National Conference of Standards Laboratories (NCSL)4
NCSL Z 540-1 General Requirements for Calibration Laboratories and Measuring and Test Equipment

3 REQUIREMENTS

3.1 Terms and Definitions The definition of terms shall be in accordance with IPC-T-50 and 3.1.1 through 3.1.21.

3.1.1 AQL (Acceptable Quality Level) Maximum number of defects per hundred units that can be considered satisfactory as a process average.

3.1.2 Bias Filling yarns are off-square to the warp ends.

3.1.3 Bow Filling yarns lie in an arc across the width of the fabric.

3.1.4 Creases A ridge in the fabric caused by a fold or wrinkle being placed under pressure.

3.1.5 Defects A substandard area in a fabric.

1. www.ipc.org
2. www.astm.org
3. www.iso.ch