



IPC-SM-817A

General Requirements for Dielectric Surface Mounting Adhesives

Developed by the IPC-SM-817 Task Group (5-21k) of the Assembly and Joining Committee (5-20) of IPC

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

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General Requirements for Dielectric Surface Mounting Adhesives

1 SCOPE

This document covers requirements and test methods for dielectric adhesives used to hold components in place from mounting to the soldering process and for their long term properties as a part of the printed wiring board.

1.1 Purpose This standard defines dielectric surface mounting adhesives through specification of test methods and inspection criteria. The adhesives include those intended for application by pin transfer, syringe and screening/stenciling. Cure methods include ultra-violet (UV) or visible light, heat or ambient conditions.

1.2 Adhesive Classification The classification scheme used in this standard is based on cure method.

Example – IPC-SM-817/1

IPC-SM-817/
(specification) -

1
(cure system)
(heat)

1.2.1 Adhesive Cure System

Grade 1 Heat only (IR, Convection or Conduction)

Grade 2 UV or visible light (with or without secondary cure mechanisms)

Grade 3 Ambient cure only

2 APPLICABLE DOCUMENTS

The following documents, of the issue currently in effect, form a part of this specification to the extent specified herein.

2.1 IPC¹

IPC-T-50 Terms and Definitions for Interconnecting and Packaging Electronic Circuits

IPC-TM-650 Test Methods Manual²

2.4.42 Torsional Strength of Chip Adhesives

2.4.42.1 High Temperature Mechanical Strength Retention of Adhesives

2.6.1 Fungus Resistance Printed Wiring Materials

2.6.3.1 Solder Mask – Moisture and Insulation Resistance

2.6.11 Solder Mask – Hydrolytic Stability

2.6.14 Solder Mask – Resistance to Electrochemical Migration

2.2 ASTM³

ASTM D-1002 Standard Test Method for Strength Properties of Adhesives in Shear by Tension Loading (Metal to Metal)

ASTM D-1210 Test For Fineness of Grind of Adhesives

ASTM D-2556 Standard Test Method for Apparent Viscosity of Adhesives Having Shear-Rate-Dependent Flow Properties.

1. www.ipc.org

2. Current and revised IPC Test Methods are available on the IPC Web site (www.ipc.org/html/testmethods.htm)

3. www.astm.org