



IPC-TM-650 TEST METHODS MANUAL

Number 2.6.17	
Subject Hydrolytic Stability, Flexible Printed Wiring Material	
Date 12/82	Revision
Originating Task Group	

1 Scope This test method defines the procedure for determining the hydrolytic stability of a copper foil-clad or unclad flexible dielectric material.

2 Applicable Documents None

3 Test Specimens

3.1 Three 10 cm x 10 cm x thickness sheets

4 Apparatus

4.1 Reagent grade potassium sulfate

4.2 Desiccator, 25 cm diameter minimum

4.3 Cotton swabs

4.4 Test chamber (oven) capable of maintaining up to 100°C ± 10°C

5 Procedure

5.1 Preparation

5.1.1 Prepare a saturated solution of distilled water and potassium sulfate (35 grams per 100 cc) at the temperature of the test, as indicated in Table 1. Pour the solution into the desiccator to a level just below the ceramic plate. Crystals of potassium sulfate should remain visible in the saturated solution at the chamber operating temperature.

Table 1 Test Conditions

Class	Temperature	Days
1	35°C ± 1°C	Four
2	85°C ± 2°C	Seven
3	85°C ± 2°C	120

5.1.2 Clean the test specimen thoroughly, using the coating supplier's recommended solutions and procedures.

5.1.3 Place the test specimen in the desiccator in a vertical position on the ceramic plate (specimens shall not touch one another), seal the desiccator lid with silicone grease, and close the desiccator.

5.1.4 Place the desiccator in the test chamber (oven), pre-setting to the conditions of Table 1.

5.2 Evaluation

5.2.1 After the required time exposure, remove the test specimens and visually examine for chalking, blistering, cracking, and general degradation.

5.2.2 Touch the surface of the coating with a swab of absorbent cotton and observe for particles of the cotton adhering to the coating.

6 Notes

6.1 Examination and testing may be done at intervals between the test chamber time requirements, if there is suspicion of an early failure and evaluation time is critical.