ASSOCIATION CONNECTING
ELECTRONICS INDUSTRIES

2215 Sanders Road
Northbrook, IL 60062-6135

Number	
3.15	
Subject	
Fungus Resistance, Connectors	
Date	Revision
3/79	
Originating Task Group	

IPC-TM-650
TEST METHODS MANUAL

1 Scope This test method is used to determine if the dielectric materials are nutrient to specific fungus microorganisms.

2 Applicable Documents None

3 Test Specimen

3.1 The test specimen must be at least one end product connector.

4 Equipment/Apparatus

4.1 Autoclave capable of maintaining 30°C and 95% RH and an ultraviolet (3600 angstroms) source for subsequent decontamination

4.2 Microorganisms

4.2.1 Choetomium globosum No. 6205

4.2.2 Memnoniella flavus No. 11973

4.2.3 Aspergillus flavus No. 10836

4.2.4 Penicillum citrinum No. 9849

4.3 Microscope capable of 18X

5 Procedure

5.1 Preparation

5.1.1 All glassware, inoculating loops, pipettes, etc., must be sterilized at 117 Kp and 135°C prior to commencing any phase of the test.

5.1.2 Use each one of the fungus microorganisms for a composite spore suspension.

5.1.3 The spore suspension must be used within 24 hours at temperatures between 22°C to 32°C and can be stored for a maximum of 48 hours at 1.67°C to 7.22°C.

5.1.4 Prepare 25 ml of distilled water having a pH value from 5.8 to 7.2 at temperatures between 22°C to 32°C.

5.1.5 Introduce 1.0 ml of distilled water into each tube of fungi and gently rub the spore layer with a sterilized inoculating loop without disturbing the agar surface.

5.1.6 Pour the four solutions in a sterilized Florence flask containing 100 ml of distilled water and mix the suspension thoroughly.

5.2 Test

5.2.1 Set the autoclave at 30°C and 95% RH and stabilize for a minimum of two hours.

5.2.2 Place the specimen in the chamber and spray all of the test surfaces thoroughly, using the 250 ml Florence flask and atomizer attachment.

5.2.3 Operate the chamber for 28 days, observe and note fungus growth daily. (Do not remove the specimen from the chamber for prolonged periods.)

5.2.4 After exposure, examine all surfaces through an 18X microscope.

5.3 Evaluation

5.3.1 Report the specimens that were found to be nutrient to fungus growth.

5.3.2 Corrosion should be noted separately from the fungus test results.

6 *Notes*

6.1 After exposure and subsequent examinations, the materials, equipment, component or part, and the test chamber must be decontaminated by exposure on all sides to ultraviolet rays (3600 angstroms) for a minimum of two hours, or sprayed with a solution of 1:750 zephiran chloride. (One part zephiran chloride to 750 parts distilled water.)

6.2 Microorganisms available from:

AMERICAN TYPE CULTURE
2301 Parklawn Drive
Rockville, MD 20852