The Institute for Interconnecting and Packaging Electronic Circuits
2215 Sanders Road • Northbrook, IL 60062-6135

IPC-TM-650
TEST METHODS MANUAL

Number **2.4.6**	
Subject **Hot Oil**	
Date **4/73**	Revision
Originating Task Group **N/A**	

1.0 Scope The determination of lamination bond quality by immersion in an oil stabilizing high temperature bath.

2.0 Applicable Documents None

3.0 Test Specimen Use each of the four IPC test pattern specimens H in Figures 1 through 7 shown in part 5.8.3 of this publication. Any other sample of the production boards may be used by mutual agreement between the vendor and the customer.

4.0 Apparatus

4.1 Test Oil Commercial grade oil having a boiling and flash point higher than 300°C (572°F).

4.2 Container Heating container capable of heating oil to 300° ± 10°C (572°F).

4.3 Stopwatch

4.4 Chamber Circulating air chamber capable of attaining 200°C (392°F).

5.0 Procedure

5.1 Preparation

5.1.1 Saw the four coupons from specimen H. Do not cut coupons so as to introduce any shearing, bending, or breaking stresses.

5.1.2 Condition specimens by suspending in a circulating chamber at 135° ± 15°C for one hour.

5.2 Test

5.2.1 Specimens must be tested within two minutes after removal from the chamber to preclude ambient moisture from returning to specimens before flotation.

5.2.2 Remove the specimens one at a time and float on the surface of the hot oil bath, preset at 260° +6° –3° for 20 seconds +1 –0 seconds.

5.2.3 After removal from the hot oil and cooling, immerse specimens in chlorethene-NU or trichlorethylene for a few seconds, then dry with compressed air.

5.2.4 Rinse in clean isopropyl alcohol and again blow dry before examination.

5.3 Evaluation Examine each specimen for measling, blistering or delamination.