1.0 Scope  This test method is used for determining that
marking inks and/or color coding will not become illegible or
discolored when subjected to solutions that are normally used
as cleaning agents for printed boards or printed board assem-
bles.

2.0 Applicable Documents  None

3.0 Test Specimens  Test specimens may consist of test
coupons or production printed boards with the appropriate
markings. The amount or size of the marking on the test
specimen shall be sufficient enough to satisfactorily perform
the procedure of section 5.

4.0 Apparatus or Material

4.1 Vessel for each solution used.

4.2 Toothbrush or suitable applicator for each solution used.

4.3 Optical Aid capable of a 3X magnification.

4.4 Solution A: Mixture of one part isopropyl alcohol and
three parts by volume of mineral spirits at 25 ± 5°C.

4.5 Solution B: Terpene defluxer consisting of a minimum of
90% d-limonene and 10% surfactant at 25 ± 5°C.

4.6 Solution C: Mixture of 42 parts by volume of water (1
megohm resistivity), one part by volume of propylene glycol
monmethyl ether, and one part by volume of monoethanol-
amine at 63 to 70°C.

5.0 Procedure

5.1 The following procedure shall be using solutions A, B,
and C individually.

5.1.1 The test specimens shall be submerged for a mini-
mum of 3 minutes (+ .5 minutes/ – 0.0 minutes) in a vessel
containing the solution.

5.1.2 The test specimens shall be removed from the vessel
and with a toothbrush (wetted with solution) the specimen
shall be brushed for a minimum of 10 strokes on the area
where the marking is present.

5.1.3 Steps 5.1.1 and 5.1.2 shall be repeated on the test
specimen two additional times.

5.1.4 After the third submersion and brushing, the test
specimens shall be air or blown dry.

5.1.5 The test specimens shall be evaluated in accordance
with 5.2.

5.2 Evaluation  After the test has been performed, the test
specimens shall be examined for any markings that are miss-
ing in whole or part, faded, smeared, blurred or shifted to the
extent that they cannot be identified from a distance of 150
mm [6.0 in] or by examining with a optical aid using a magni-
fication of no more than 3X shall constitute a failure.

6.0 Notes

6.1 If test solutions other than those described herein are to
be used, then the solutions should be agreed upon between
the vendor and customer prior to testing.

6.2 The three solutions being used to perform this test
exhibit some potential for health and safety hazards. Safety
precautions shall be observed.

6.3 It is the intent of this test method to subject a different
set of test samples to each test solutions. It is at the option of
the tester to subject the samples through the test solutions
consecutively. If the samples fail after consecutive solutions
the test should be performed with individual test solutions.