Call Letters	PSTC-21
Date of Issuance	2/59
Revised	8/85
Revised	8/89
Revised	6/00
Revised	10/03

Stain Test for Finishes

1. DEFINITION

1.1 Paint staining is the discoloration of a painted surface that may result from a pressure sensitive adhesive tape being in contact with that surface. (It is not to be confused with that discoloration of the untaped area which may result when exposed to elevated temperatures or ultraviolet light.)

2. SIGNIFICANCE

2.1 Paint staining is an important property determination if a tape is to be applied to a painted surface wherein any resulting discoloration is undesirable.

3. SCOPE

3.1 To provide the user with a general method of testing a tape for paint staining characteristics. Because of the many types of paints and their conditions of drying or baking, this test must be adapted to the specific paint and conditions with which the user is concerned.

4. TEST SPECIMEN

4.1 Discard at least three, but no more than six, outer wraps of tape from each roll being tested prior to taking test specimens.

4.2 All specimens shall be of equal dimensions sufficient in size to give good comparison between the area covered by the specimen and that not covered, preferably 12 mm wide by 50 mm long (1/2" wide by 2" long).

5. EQUIPMENT AND MATERIAL

5.1 The test panels shall be plain flat metal, or plate glass, of convenient size preferably 100 mm x 100 mm (4 x 4") square and of any convenient thickness.

5.2 Standard paint spray equipment or other suitable means of applying a uniform paint film.

5.3 Test oven shall be reliable convection or forced-circulation type, of sufficient size to accommodate the test panels and capable of maintaining, within ± 2°C the temperature conditions of drying or baking under which the paint and tape will be used.

5.4 A 2 kg (4 1/2 lb.) rubber-covered roller, as described in Appendix B.

5.5 The paint shall be of the same type as that being used in the specific field application.

6. TEST METHOD

6.1 Using standard spraying technique or other method, coat a test panel with the paint to be used to obtain a dry film thickness of 37.5 to 50 microns. A primer coat may be necessary to obtain sufficient bond to the test panel.

6.2 Allow the coated panel to air dry for 30 minutes at standard conditions of 23°C ± 2°C, 50% ± 5% RH. See Appendix A.

6.3 After this preliminary dry, expose the test panel to the elevated temperature recommended by the paint manufacturer, or as set up by the user, to obtain a satisfactory finish.

6.4 After allowing the panel(s) to return to room temperature, apply the tape specimens to be tested, including an accepted standard or control (no more than four strips per panel) so that each strip extends radially from the center towards a corner, as indicated in Figure 1.

6.5 Roll down each strip manually with the 2 kg (4 ½ lb.) roller, three times in each direction at a rate of 150 to 300 mm/s (6 to 12"/s).

6.6 Re-expose the test panel - so prepared, to the same conditions as specified in 6.3 above.

6.7 At room temperature, after the above exposure, strip off specimens and clean the panel using naphtha or other suitable solvent to remove any adhesive residue. It is advisable to reapply the stripped specimens on the reverse side of the panel, in order to retain their identity.

6.8 Examine panel for staining in the areas of tape application.

7. REPORT

7.1 Using a relative numerical rating scale, record for each specimen its relative degree of stain, including a brief qualitative description of the stain.

*This specifically described procedure is considered to be necessary in order to neutralize any effects of optical illusion that are known to occur and interfere with a correct interpretation of test results.

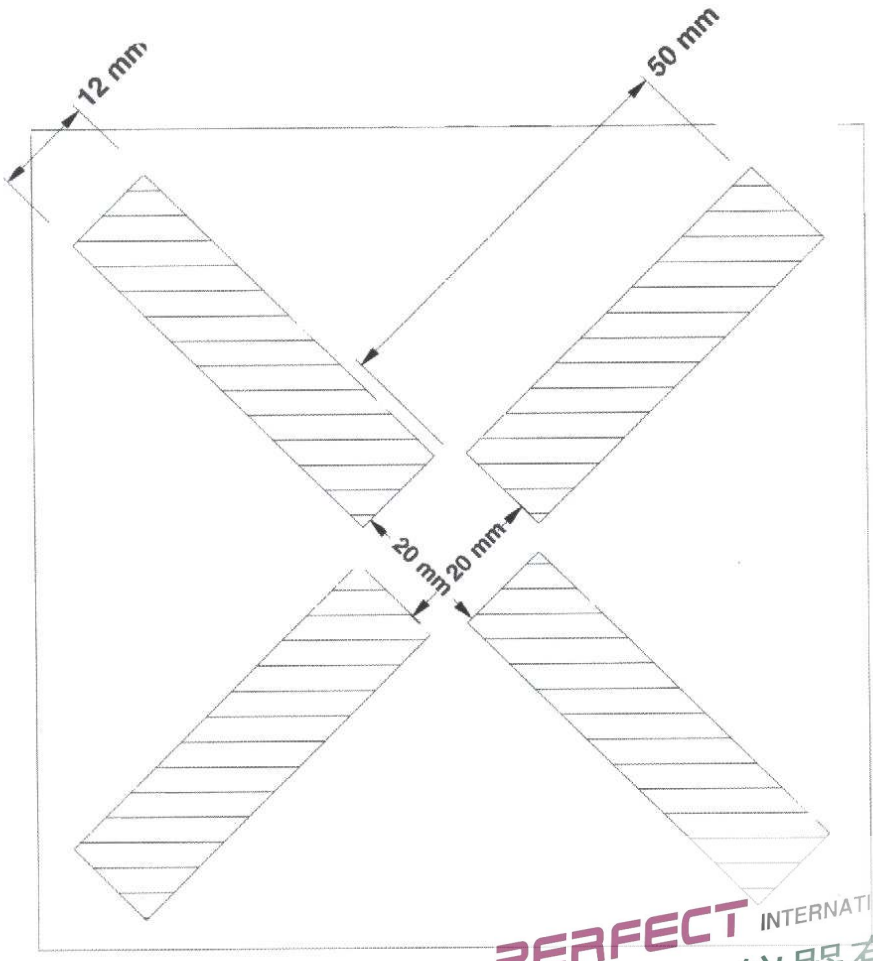

Figure 1. Stain test panel