

**5.3 Performance Tests**

5.3.1 Drying Opacity (Hiding Power) | The dried films of the types I, II and IV stencil inks, shall be applied at a wet-film thickness of 0.002 inch. The type III ink shall be sprayed to a dry film thickness of 0.001 inch. All types shall show the minimum contrast ratios indicated for the respective colors listed in table I, when tested in accordance with ASTM D 2805.

ASTM 3.Terminology

ASTM D 2805 - 96a (re-approved 2003)

3.2.1.1 Cw: the contrast with a white substrate of reflectance W.

Thus:  $Cw = Ro / Rw$

3.2.2.2 Ro: the reflectance of a film on a black surface with a reflectance of 1% or less, which is effectively zero for the purpose of this test.

3.2.2.3 W: the reflectance of a white substrate.

3.2.2.4 Rw: the reflectance of a film applied on a white substrate of reflectance W.

**Test Results:**

Ro= 4.30

Rw=4.75

$Cw = Ro / Rw$

$Cw = 0.9$  which match the minimum contrast ratios indicated for the respective colors listed in table I.

Status: **PASS**

5.3.2 Color (for all types). The color of the stencil inks shall be a general match to the specified color in table I as determined by visual inspection under illumination in accordance with ASTM D1729. The sample for the test shall be prepared in the following manner: Apply a film of the sample ink at complete hiding to a non-porous panel and allow to dry completely. If the visual inspection described above proves inconclusive, the color variance of AE 1.75 maximum will be considered acceptable.

**Test Results:**

Color geometry during measurement: [D65,2°,DIN,D8i,Abs] described as daylight on ASTM 1729.

Target variance: 1.75

Actual color variance: 0.58.

Status: **PASS**

5.3.3 GLOSS. For types I, II, III and IV stencil ink shall be tested on an absorbent surface and for type II gloss shall be tested on fiberboard with a maximum gloss reading of 10 being acceptable as tested in accordance with ASTM D 523.

**Test Results:**

Target gloss value=10. (Gloss geometries of 20°, 60° and 85°)

20°Geometry = 1.0

60°Geometry = 6.7

85° Geometry = 8.2

Status: **PASS**

**Tested and Verified by:**

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