

PAINTS
COVERING CAPACITY OF DRY FILM

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NO USE RESTRICTION*This is a translation, the French original shall be used in all cases of litigation**Date of translation : 02/09/1998***1. OBJECT AND FIELD OF APPLICATION**

The object of this méthode is to describe a method of operation for determining the minimum thickness of dry film providing total masking, under visual examination, of black and grey bands on an opacity chart.

2. PRINCIPLE

The method consists of applying varying thicknesses of paint with a defined viscosity.

3. EQUIPMENT**3.1. SHEET METAL**

of minimum dimensions 150 mm x 300mm, degreased or phosphated.

3.2. OPACITY CHART WITH BLACK AND GREY CONTRASTS

format 40 x 300 mm, marked along the length with 32 alternate black and grey bands, 8 and 10 millimetres wide respectively. (Supplier BRAIVE, reference type No. 14; 39 rue Bles, LIEGE - BELGIUM, whose agent in France is CHIMILAB ESSOR, 153 Boulevard Anatole France, 93521 St DENIS CEDEX 1).

Note : *In order to get rid of any ink migration from the opacity chart to the paint, first apply on the opacity chart $30\text{ }\mu\text{m} \pm 5\text{ }\mu\text{m}$ of production finish clear coat. Place the clear coated opacity chart in the oven in conformity with the instructions on the standard documents.*

3.3. APPLICATION EQUIPMENT

in conformity with the equipment described in méthode d'essai D59 1170.

3.4. VENTILATED OVEN

adjustable from 20 to 250°C \pm 2°C.

3.5. PERMASCOPE

in conformity with the equipment described in méthode d'essai D26 5316.

3.6. ADHESIVE TAPE

less than 25 millimetres wide.

3.7. INSPECTION CHAMBER WITH A LIGHT SOURCE

in conformity with the chamber described in méthode d'essai D15 1343.

4. PREPARATION OF TEST SPECIMENS

Fix, onto the sheet metal (3.1), using the adhesive tape (3.6), an opacity chart (3.2) as shown in the appendix.

5. METHOD OF OPERATION

- Dilute the paint to the specified viscosity with the solvent or a suitable mixture of solvents in conformity with méthode d'essai D55 1016.
- Apply a single coat to the test specimen assembly defined in the appendix.
- Leave to dry for 2 minutes at ambient temperature and humidity.
- Apply a second single coat starting lower down the plate as shown in the appendix.
- Leave to dry for 2 minutes at ambient temperature and humidity.
- Continue to apply as many coats as required so that the contrasts are no longer visible in the lower quarter of the test specimen.

Note : *The number of coats applied in the case of a stoving paint must be a maximum of six. In the case where this number of coats is insufficient, repeat the test on a new plate reducing the speed of spray in order to make each coat thicker.*

- Leave the test specimen to dry horizontally and protected from dust for 10 minutes at ambient temperature and humidity.
- Stove, if required, in the oven (3.4) in conformity with the instructions on the documents.
- Measure on the sheet metal, on each side of the opacity chart, the thicknesses of the dry film, using the permascop (3.5).

Note : *The thicknesses must increase but the amount of increase must not exceed 2 micrometres per centimetre.*

- Examine, in the inspection chamber (3.7), the test specimen according to méthode d'essai D15 1343 using the light source D₆₅ (representing daylight).

6. EXPRESSION OF RESULTS

The covering capacity of dry film is defined by the minimum thickness of the dry film in micrometres under which the black and grey contrasts are no longer visible.

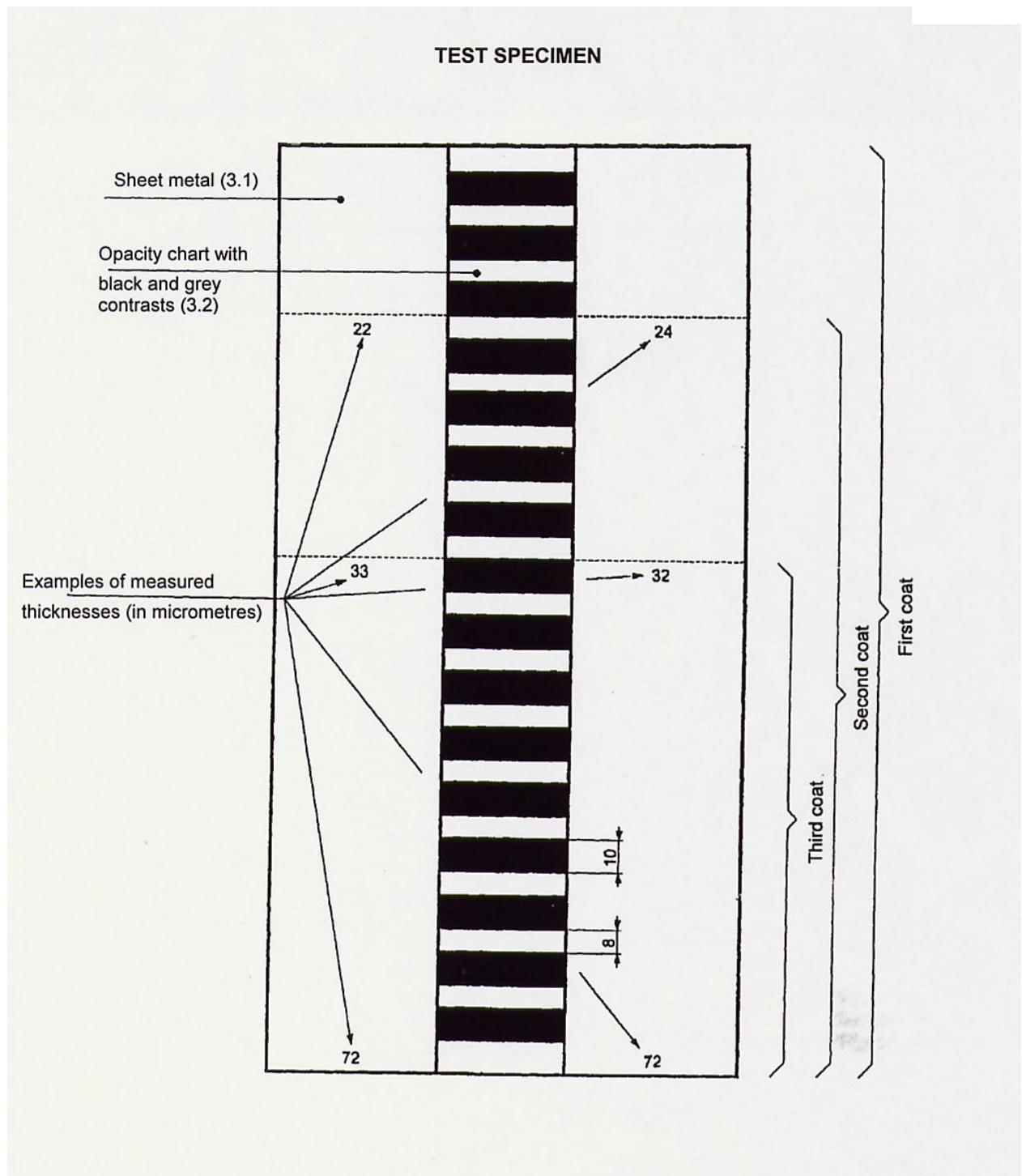
Express the result in the form of the arithmetic mean of the two thicknesses measured across the sheet metal, either side of the opacity chart under the last band of visible contrast; these must not vary by more than 2 micrometres, otherwise the test has to be repeated.

7. TEST REPORT

As well as the results obtained, the test report must indicate :

- the reference to this méthode,
- the exact reference of the paint and the name of the supplier,
- the operating details not specified in the method as well as any possible incidents likely to have affected the results.

APPENDIX



8. RECORDS AND REFERENCE DOCUMENTS

8.1. RECORDS

8.1.1. CREATION

- OR : 01/01/1981 – CREATION OF THE PSA NORME. REPLACES THE ASSOCIATION NORME No. 1303.

8.1.2. SUBJECT OF THE MODIFICATION

- C : 24/03/1997 – INTRODUCED INTO IDEM (*French only*).
- D : 08/09/1997 – MODIFICATION AND ADDITION OF ONE LINE TO § 3.2. MODIFICATION TO § 3.7. AND TO § 6.

8.2. REFERENCE DOCUMENTS

8.2.1. PSA DOCUMENTS

8.2.1.1 Normes

D15 1343, D26 5316, D55 1016, D59 1170.

8.2.1.2. Others

8.2.2. EXTERNAL DOCUMENTS

8.3. EQUIVALENT TO :

8.4. CONFORMS TO :

8.5. KEY-WORDS