

**PAINT COATINGS
SOLVENT THINNING**

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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 : 14/08/1998***1. OBJECT**

The object of this méthode is to characterise the resistance of a paint coating to solvent thinning. It applies to the complete range of paint films on metallic or plastic test specimens or on body elements. This test is a simple method of assessing the degree of curability of a paint film.

2. PRINCIPLE

The test consists of placing the paint film into contact with a solvent and determining the contact time required to remove the upper layer of the film by scraping it with a thumb nail.

3. EQUIPMENT**3.1 ENCLOSURE**

conditioned at $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$, ambient hygrometry.

3.2 VENTILATED HOOD**3.3 CHRONOMETER**

accurate to the second.

3.4 ABSORBENT COTTON WOOL

of the surgical type.

3.5 BEAKER

of 50 ml.

3.6 CORK MAT

flat. 30 cm x 30 cm in dimensions and 3 mm thick minimum.

Note : *This mat is used as a thermal insulation between the laboratory work surface and the test specimen.*

3.7 TWEEZERS**4. REAGENTS****4.1 SOLVENTS**

According to the table in appendix 1.

5. PREPARATION OF TEST SPECIMENS

The duration between the end of the application and baking and the thinning test shall be that defined in standard documents.

6. METHOD OF OPERATION

The test specimens, solvents (4.1) and the cork mat (3.6) shall be conditioned at $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$ in the enclosure (3.1) 24 h before the test.

Because of the toxic nature of most solvents, it is recommended to carry out the test under the hood (3.2).

- Place the painted test specimen onto the cork mat (3.6).
- Fill the beaker (3.5) to 3/4 full with the appropriate solvent (4.1).
- Take a ball of absorbent cotton wool (3.4) of approximately 30 mm diameter.
- Soak the cotton wool in the solvent by plunging it into the beaker (3.5) for approximately 30 seconds. Once the cotton wool has been soaked in the solvent, it must always be handled with tweezers (3.7).
- Place the cotton wool on the test specimen and start the chronometer (3.3) simultaneously.
- Leave the cotton wool in contact with the paint for the time specified in standard documents.
- Remove the cotton wool from the mat and deposit it in the beaker containing the solvent (3.5).
- Wipe the solvent remaining on the mat rapidly with dry cotton wool.
- Position the thumb nail on the area which has been in contact with the solvent at an angle of approximately 45° .
- The first scraping with the thumb nail is carried out with little pressure.
- Note if the scraping has damaged the paint and removed the material (scores excepted).
- A second scraping is carried out rapidly for confirmation.
- If the paint film is damaged by the thumb nail :
 - restart the test and leave the cotton wool soaked in solvent in contact with the paint film for 30s, 60 s, 90 s ..., changing the location on the mat each time.
 - note the minimum time required to obtain a damaged paint film.

7. EXPRESSION OF RESULTS

The resistance of the paint film to solvent thinning is expressed by the minimum time required to damage the paint film.

8. ACCURACY

Repeatability :

The difference between two results carried out in repeatability conditions must not be more than 30 seconds.

9. TEST REPORT

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

- the description of the paint system used,
- the conditions of application and baking,
- the recording of the various layers of paint film thicknesses.

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APPENDIX 1**TABLE OF SOLVENTS**

SOLVENT	PROLABO REFERENCE
XYLENE RP	28975291
ETHANOL RP	20821296

10. RECORDS AND REFERENCE DOCUMENTS

10.1. RECORDS

10.1.1. CREATION

- OR : 16/07/1998 – CREATION OF THE NORME

10.1.2. OBJECT OF THE MODIFICATION

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10.2. REFERENCES DOCUMENTS

10.2.1. PSA DOCUMENTS

10.2.1.1. Normes

10.2.1.2. Others

10.2.2. EXTERNAL DOCUMENTS

10.3. EQUIVALENT TO :

10.4. CONFORMS TO:

10.5. KEY-WORDS