

**PRE-GELLED ANTI-CHIPPING AND  
SEALING PRODUCTS  
TENDENCY TO BLISTERING IN HUMIDITY**

Page 1/4

**NO USE RESTRICTION***This is a translation, the French original shall be used in all cases of litigation**Date of translation : 01/09/1997***1. OBJECT AND FIELD OF APPLICATION**

The object of this méthode is to describe a method of operation for determining the tendency to blistering of curable anti-chipping and sealing products applied thinly or thickly and exposed to humidity after a pre-gel time phase.

**2. PRINCIPLE**

The product to be examined is applied to sheet metal pre-coated with coverable primer paint then pre-gelled, exposed in humid atmosphere, stabilised in ambient surrounding before an intermediate paint is applied and stoved in a ventilated oven. Resistance to blistering is characterised by the proportion of blistered surface on one square decimetre sample.

**3. EQUIPMENT****3.1 STEEL SHEET PLATES**

120 mm x 200 mm in dimension and 0,95 mm  $\pm$  0,05 mm thick, phosphated and covered with coverable primer paint from the production unit range considered.

**3.2 THICKNESS TEMPLATE**

100 mm x 200 mm in aperture surface with variable thickness.

**3.3 MICROMETER****3.4 THERMOSTATICALLY CONTROLLED OVEN**

With forced air adjustable from 20°C to 250°C, to  $\pm$  2°C, equipped with a detachable grid.

**3.5 CONDITIONED ENCLOSURE**

Adjustable from 0 to 150°C, to  $\pm$  2°C and from 0 to 95% relative humidity, to  $\pm$  3% relative humidity.

**4. PREPARATION OF THE TEST SPECIMENS****4.1 ASSESSMENT OF THE THICKNESS OF WET PRODUCT TO BE DEPOSITED**

If there are no specific requirements, the test must be carried out on a coat of pre-gelled product 1 mm  $\pm$  0,1 mm thick.

Taking into account the percentage (m/m) of dry extract of the product to be tested, produce a first test specimen to determine the thickness of wet product required to obtain a suitable coat of dry product.

#### 4.2 DEPOSIT OF THE COAT (SEE APPENDIX)

- Position two plates (3.1.) under the template (3.2.) in order to obtain coatings in identical product on each plate (squares of 100 mm).
- Apply the product to the plates as follows:
  - after the product to be tested has been deposited in the aperture of the template (3.2.), drag the film with a glass rod of 14 mm diameter.
  - move the glass rod maintaining it perfectly rigid on the frame of the template (3.2.), lengthwise, in order to obtain a continuous and even sliding motion to produce a homogeneous covering.
  - remove the template (3.2.) and proceed with the pre-gel time in accordance with the production unit range considered.

#### 5. METHOD OF OPERATION

- After the period of time required to return to ambient temperature, place the test specimens in the enclosure (3.5.) in the conditions stated in the production unit documents or/and in the case where there are no details, at  $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$  and  $55\% \pm 3\%$  relative humidity (equivalent to 100% relative humidity at  $28^{\circ}\text{C}$ ).
- Remove the test specimens according to the conditions stated in the production unit documents or/and where there are no details, after 72 hours.
- Check visually the coat on the product.
- Apply the intermediate paint from the production unit considered after 2 hours of returning to the temperature of  $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$ .
- Carry out the stoving according to the conditions defined in the documents.

#### 6. EXPRESSION OF RESULTS

- The plates are checked when they are taken out of the oven and the blisters are immediately defined.
- The extent of blistering is expressed in percentage of blistered surface in square decimetre.
- Using a scalpel cut the largest blisters, record the position of the cavities (in the mass or at the product-support interface) and the appearance of the product at this location.

**Note.** *It is absolutely necessary to define the blisters with a pencil as soon as the plates are removed from the oven. During cooling, defects or blisters have a tendency to become flattened and the stretched product on the surface sometimes conceals the blistering phenomenon.*

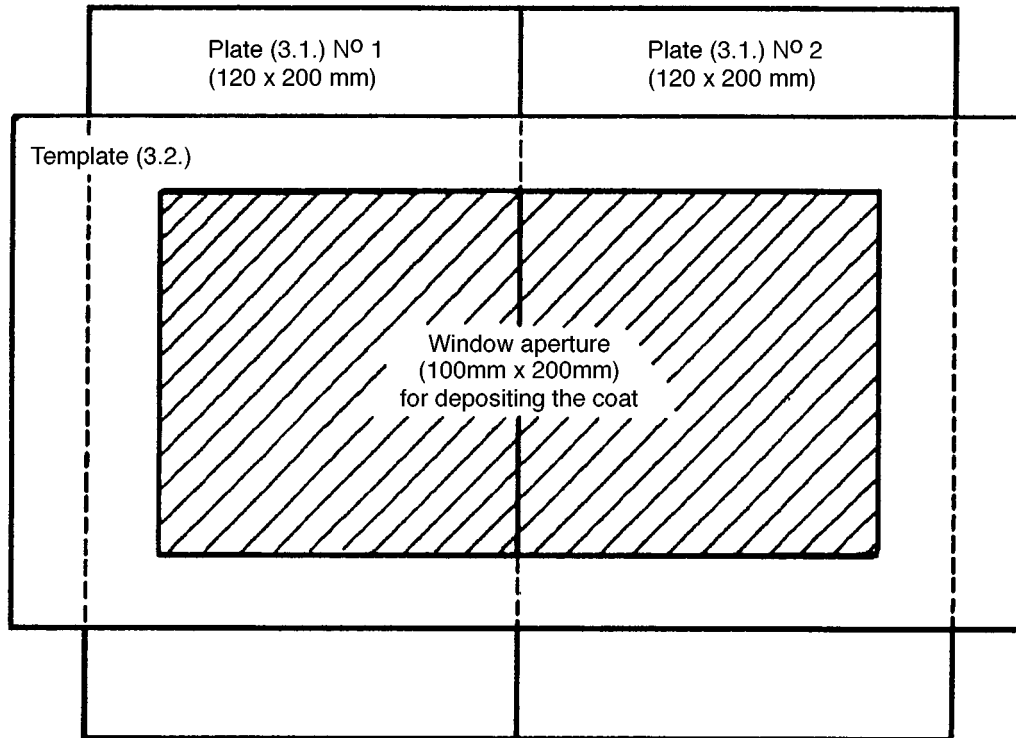
#### 7. TEST REPORT

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

- the reference to this méthode,
- the reference and the name of the supplier of the product examined,
- the type of support and the intermediate paint used,
- the specific production conditions,
- the observations made after pre-gel time of the product and during the opening of blisters,
- the operating details not specified in the method as well as any possible incidents likely to have affected the results.

## APPENDIX

## DIAGRAM FOR THE COAT DEPOSIT



## 8. RECORDS AND REFERENCE DOCUMENTS

### 8.1. RECORDS

#### 8.1.1. CREATION

OR : 01/04/1987 – CREATION OF THE NORME

#### 8.1.2. SUBJECT OF THE MODIFICATION

- A : 01/10/1995 – MODIFICATIONS TO PARAGRAPHS 3.5 AND 5.
- B : 03/03/1997 – INTRODUCED INTO IDEM (*French only*).

### 8.2. REFERENCE DOCUMENTS

#### 8.2.1. PSA DOCUMENTS

##### 8.2.1.1 Normes

##### 8.2.1.2. Others

#### 8.2.2. EXTERNAL DOCUMENTS

### 8.3. EQUIVALENT TO :

REND551209

### 8.4. CONFORMS TO :

### 8.5. KEY-WORDS