
International Standard



1265

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Plastics — Polyvinyl chloride resins — Determination of number of impurities and foreign particles

Plastiques — Résines de polychlorure de vinyle — Détermination du nombre d'impuretés et corps étrangers

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Descriptors : plastics, resins, counting, impurities.

FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 1265 was developed by Technical Committee ISO/TC 61, *Plastics*.

It was submitted directly to the ISO Council, in accordance with clause 6.13.1 of the Directives for the technical work of ISO. It cancels and replaces ISO Recommendation R 1265-1970, which had been approved by the member bodies of the following countries :

Australia	Hungary	Poland
Austria	India	Romania
Belgium	Iran	South Africa, Rep. of
Bulgaria	Israel	Spain
Canada	Italy	Sweden
Czechoslovakia	Japan	Switzerland
Egypt, Arab Rep. of	Korea, Dem P. Rep. of	Turkey
France	Korea, Rep. of	United Kingdom
Germany, F. R.	Netherlands	USA
Greece	New Zealand	Yugoslavia

No member body had expressed disapproval of the document.

Plastics — Polyvinyl chloride resins — Determination of number of impurities and foreign particles

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method of determining the number of impurities and foreign particles in a flattened surface of polyvinyl chloride resin. It is not applicable to paste resins because of their finely divided state.

2 PRINCIPLE

Flattening of a certain quantity of resin between a rigid plate (covered with a sheet of glazed white paper) and a glass sheet containing a grid, and counting of the impurities and foreign particles visible in 25 squares.

Expression of the result by extrapolation, as the number of specks per 100 squares of the grid.

3 APPARATUS

3.1 Glass sheet, 340 mm × 340 mm × 4,5 mm, colourless, perfectly transparent, and without defects such as stripes, bubbles, black spots, etc.¹⁾

In the centre and on the surface of the glass sheet is a grid 300 mm × 300 mm consisting of 100 squares of 30 mm × 30 mm. This grid may be drawn with an indelible pencil, a diamond or any other appropriate tool, on the face of the sheet which is not in contact with the resin.

3.2 Rigid plate, 450 mm × 450 mm, covered with a sheet of glazed white paper.

3.3 Photographic scale of reference (see figure 2).

4 PROCEDURE

On the rigid plate (3.2), spread out about 200 cm³ of resin for examination.

Place the glass sheet (3.1) on the resin and, by slight movements of the sheet, spread the resin so that it touches the glass at least over an area of 25 squares, preferably in the centre of the plate.

To avoid any mistake, mark the limits of the entire

25 selected squares with a thick pencil trace (see figure 1). Count inside these 25 squares, the number, n_1 , of black or coloured particles which have a diameter equal to or greater than 0,250 mm. It is these particles which are called impurities or foreign matter.

To do this, proceed as follows :

- carry out the counting by visual examination at a distance of about 300 mm, in good lighting conditions;
- use the photographic scale of reference (3.3) to determine by comparison the size of coloured and black particles to be used for the measurement.

NOTE — To minimize fatigue of the operator's eyes, the operator should be trained to carry out the determination in a maximum time of 2 min.

Carry out a second determination.

5 EXPRESSION OF RESULTS

The average number of specks per 100 squares of the grid is given by the formula

$$4 \left(\frac{n_1 + n_2}{2} \right) = 2 (n_1 + n_2)$$

where

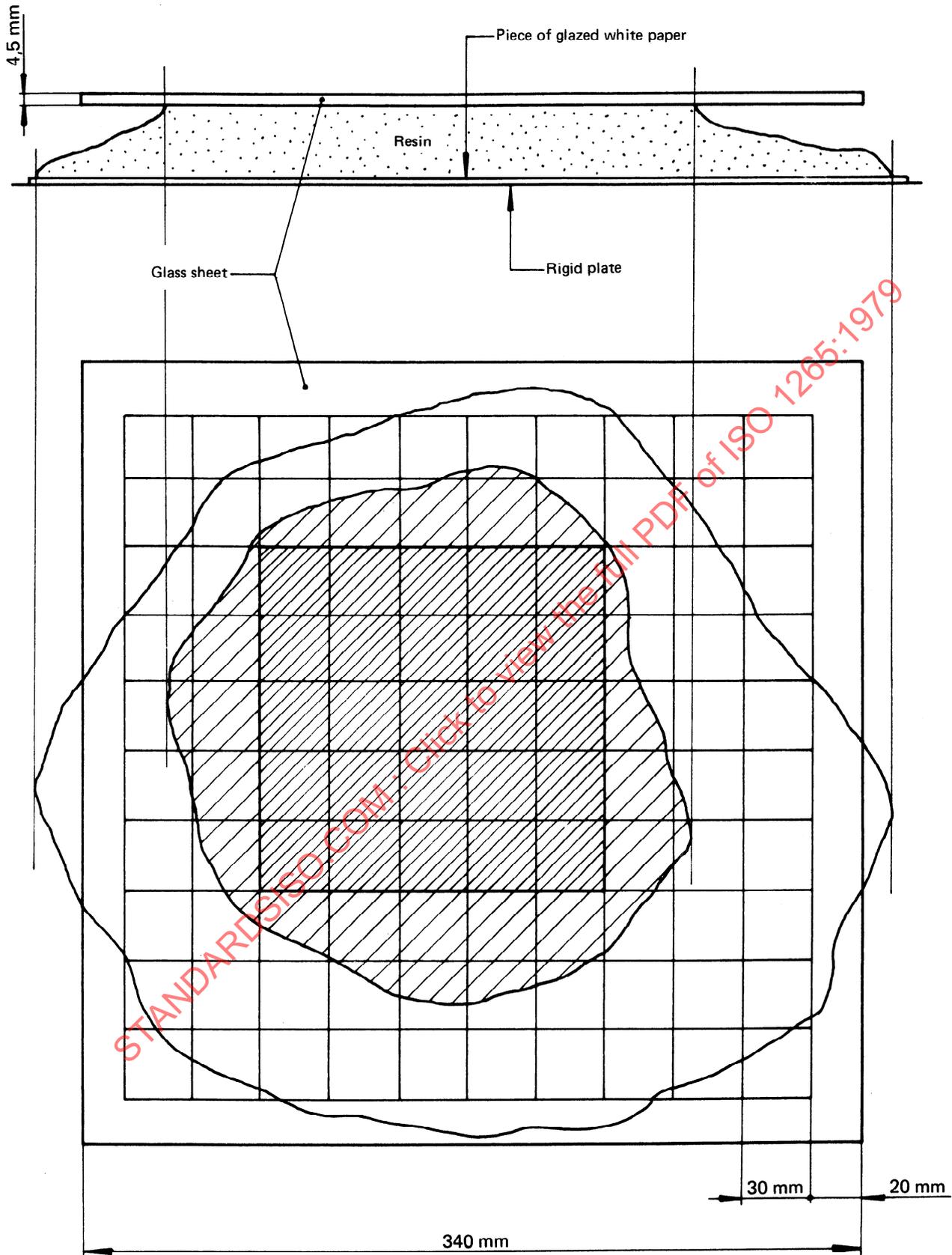
- n_1 is the value obtained in the first determination;
- n_2 is the value obtained in the second determination.

6 TEST REPORT

The test report shall include the following information :

- a) complete identification of the product tested;
- b) a reference to this International Standard;
- c) the result, expressed according to clause 5;
- d) any unusual features noted during the determination;
- e) any operation not included in this International Standard, or regarded as optional;
- f) date of test.

1) In the case of defects in the sheet, take this into account during the determination.



In broad hatching : The area of contact between the glass plate and the resin.

In close hatching : The group of 25 squares chosen for the count.

FIGURE 1 – Illustration of the method of spreading of the resin for counting of impurities and foreign particles