

**ISO**

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

**ISO RECOMMENDATION  
R 183**

PLASTICS

**DETERMINATION OF THE BLEEDING OF COLOURANTS**1st EDITION  
February 1961

COPYRIGHT RESERVED

The copyright of ISO Recommendations and ISO Standards belongs to ISO Member Bodies. Reproduction of these documents, in any country, may be authorized therefore only by the national standards organization of that country, being a member of ISO.

For each individual country the only valid standard is the national standard of that country.

Printed in Switzerland

Also issued in French and Russian. Copies to be obtained through the national standards organizations.

## BRIEF HISTORY

The ISO Recommendation R 183, *Determination of the Bleeding of Colourants*, was drawn up by Technical Committee ISO/TC 61, *Plastics*, the Secretariat of which is held by the American Standards Association, Incorporated (ASA).

Work on this matter which the Technical Committee had begun since 1955, came to an end in 1957, with the adoption of a proposal as a Draft ISO Recommendation.

On 8 May 1959, the Draft ISO Recommendation (No. 218) was distributed to all the ISO Member Bodies and was approved, by the following Member Bodies:

Austria	India	Sweden
Belgium	Israel	Switzerland
Burma	Italy	Turkey
Czechoslovakia	Japan	United Kingdom
Finland	Netherlands	U.S.A.
France	Portugal	U.S.S.R.
Germany	Romania	
Hungary	Spain	

No Member Body opposed the approval of the Draft.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in February 1961, to accept it as an ISO RECOMMENDATION.

**PLASTICS****DETERMINATION OF THE BLEEDING OF COLOURANTS****1. SCOPE**

This test is carried out in order to determine the tendency of some colouring materials to "bleed off" or to migrate from a plastics material into other materials, if both substances are brought into close contact with each other.

**2. DEFINITION**

"Colour bleeding" is to be considered as the migration of a dye present in a plastics material from the plastic itself into any other material, if both materials are in close contact. This "bleeding" may be due either to the low compatibility of the colouring matter with the plastics material which lets it exude on the surface, or to the solubility of the colouring matter in a plasticizer with migrating tendencies.

The colour bleeding depends also on the nature of the "acceptor", which therefore needs to be exactly defined.

**3. SIGNIFICANCE OF TEST**

This method is suitable only for a qualitative evaluation of the tendency of colouring matters to migrate from plastics in which they are compounded, into other materials.

**4. TEST SPECIMENS**

- 4.1 The test specimen should be in the form of a 50 mm square, cut directly from a sheet of the material to be tested.
- 4.2 If the material to be tested is an extrusion or moulding compound in granules or in chips, a sheet is obtained from it with a suitable moulding method, and the specimen is cut from the sheet thus obtained.
- 4.3 If the material to be tested is in the form of a sheet or a film, the test specimen may be cut directly from the material itself. The thickness has no importance.

**NOTES**

1. If the properties of different colouring matters must be compared, they should be compounded with a given plastics in a suitable standardized formulation.
2. The method of preparing the test specimen should be well defined for each type of plastics material, inasmuch as the thermal treatment and the subsequent transformation of the material (e.g. the "gelatinization" or "fusion" of polyvinyl chloride (PVC)) may have some influence on the colour bleeding.