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Plastics — Determination of the tendency of compounds and products based on vinyl chloride homopolymers and copolymers to evolve hydrogen chloride and any other acidic products at elevated temperatures —

Part 3:
Conductometric method

Plastiques — Détermination de la tendance des compositions à base d'homopolymères et copolymères du chlorure de vinyle à dégager du chlorure d'hydrogène et éventuellement d'autres produits acides à températures élevées —

Partie 3: Méthode conductimétrique

Reference number
ISO 182-3:1993(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 182-3 was prepared by Technical Committee ISO/TC 61, *Plastics*, Sub-Committee SC 6, *Ageing, chemical and environmental resistance.*

Together with the three other parts of ISO 182, it cancels and replaces ISO Recommendation R 182:1970, of which the four parts of ISO 182 constitute a technical revision.

ISO 182 consists of the following parts, under the general title *Plastics — Determination of the tendency of compounds and products based on vinyl chloride homopolymers and copolymers to evolve hydrogen chloride and any other acidic products at elevated temperatures*:

— *Part 1: Congo red method*

— *Part 2: pH method*

— *Part 3: Conductometric method*

— *Part 4: Potentiometric method*

Annexes A, B and C of this part of ISO 182 are for information only.

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WARNING — The use of this part of ISO 182 may involve hazardous materials, operations and equipment. This part of ISO 182 does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this part of ISO 182 to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

1 Scope

1.1 This part of ISO 182 specifies a method for the determination of the thermal stability at elevated temperature of compounds and products based on vinyl chloride homopolymers and copolymers (in the following text abbreviated as PVC) which undergo dehydrochlorination (the evolution of hydrogen chloride).

1.2 The method may be used as a quality control test during manufacture and conversion of PVC compounds. It may also be used for the characterization of PVC compounds and products, especially with regard to the effectiveness of their heat-stabilizing systems.

It is suitable for coloured PVC compounds and products where a discolouration test under the action of heat may be unsatisfactory.

1.3 The method is recommended for compounded PVC materials and products only, although it can be used for polymers in powder form under appropriate conditions, to be agreed upon between the interested parties. The method is not recommended for PVC compounds in the form of dry blends, since such materials may not be sufficiently homogeneous.

1.4 PVC compounds and products may evolve other decomposition products, in addition to hydrogen chloride, at elevated temperatures. A limited number of these decomposition products may affect the conductivity of water when they are absorbed into it. Compensation for this effect is not within the scope of this part of ISO 182, and therefore care is necessary in attempting to compare results for dissimilar compounds and products. In this case a method suitable for the determination of chloride ion (Cl^-) in the absorbing solution shall be used (see ISO 182-4).

1.5 The method may also be applied to other plastics materials which can evolve hydrogen chloride or other hydrogen halides when heated under the conditions prescribed by the relevant specifications, or as agreed upon between the interested parties.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 182. At the time of publication, the editions indicated were valid. All standards are subject