INTERNATIONAL STANDARD

ISO 871

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Plastics — Determination of ignition temperature using a hot-air furnace

Plastiques — Détermination de la température d'allumage au moyen d'un four à air chaud

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 871 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 4, *Burning behaviour*.

This third edition cancels and replaces the second edition (ISO 871:1996), which has been technically revised.

Plastics — Determination of ignition temperature using a hot-air furnace

1 Scope

1.1 This International Standard specifies a laboratory method for determining the flash-ignition temperature and spontaneous-ignition temperature of plastics using a hot-air furnace. It is one of a number of methods in use for evaluating the reaction of plastics to the effects of ignition sources.

1.2 This method does not give a direct measure of the combustibility or rate of burning of a material or any definition of the safe upper limit of temperature for the plastics in use, and it should not be used alone to describe or appraise the fire hazard or fire risk of materials, products or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire hazard or fire risk assessment which takes into account all of the factors pertinent to an assessment of the fire hazard of a particular end use.

1.3 Tests made under conditions of this method can be of considerable value in comparing the relative ignition characteristics of different materials. Values obtained represent the lowest ambient air temperature that will cause ignition of the material under the conditions of this test. Test values are expected to rank materials according to ignition susceptibility under actual use conditions.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 291, *Plastics — Standard atmospheres for conditioning and testing*

ISO 13943, *Fire safety — Vocabulary*

IEC 60584-2:1982, *Thermocouples — Part 2: Tolerances*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply in addition to those given in ISO 13943.

3.1
flash-ignition temperature
FIT
minimum temperature at which, under specified test conditions, sufficient flammable gases are emitted to ignite momentarily on application of a pilot flame

3.2
spontaneous-ignition temperature
SIT
minimum temperature at which, under specified test conditions, ignition is obtained by heating in the absence of any additional ignition source