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# INTERNATIONAL STANDARD 1390 / 1

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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## Maleic anhydride for industrial use — Methods of test — Part I : General

*Anhydride maléique à usage industriel — Méthodes d'essai —  
Partie I : Généralités*

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ISO 1390-1:1977

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UDC 661.73 : 620.1 : 543.8

Ref. No. ISO 1390/1-1977 (E)

**Descriptors** : maleic anhydride, tests, chemical analysis, determination, colouring, solidification point, acidity, ash, iron.

## 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.

Prior to 1972, the results of the work of the technical committees were published as ISO Recommendations; these documents are in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 47, *Chemistry*, has reviewed ISO Recommendation R 1390-1970 and found it technically suitable for transformation. The technical committee, however, divided the recommendation into six parts (ISO 1390, parts I to VI), which therefore replace ISO Recommendation R 1390-1970, to which they are technically identical.

ISO Recommendation R 1390 had been approved by the member bodies of the following countries :

Austria	Iran	South Africa, Rep. of
Belgium	Ireland	Spain
Brazil	Italy	Sweden
Cuba	Korea, Rep. of	Switzerland
Czechoslovakia	Netherlands	Thailand
France	New Zealand	Turkey
Germany	Poland	United Kingdom
Hungary	Portugal	U.S.S.R.
India	Romania	

No member body had expressed disapproval of the Recommendation.

The member bodies of the following countries disapproved the transformation of the Recommendation into an International Standard :

France  
Netherlands

# Maleic anhydride for industrial use – Methods of test – Part I : General

**WARNING** – Maleic anhydride is toxic and exposure to the material during handling should be kept to a minimum. It is particularly important to prevent contact with the skin and to avoid inhaling the dust.

Dangerous decomposition may occur when maleic anhydride is heated with small amounts of caustic or other alkalis, alkaline materials and organic bases. Extreme care should be exercised when handling apparatus that has become contaminated with maleic anhydride.

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## 1 SCOPE AND FIELD OF APPLICATION

This part of ISO 1390 gives general instructions relating to methods of test for maleic anhydride for industrial use. It also specifies the method to be used for the determination of the crystallizing point.

The present list of parts of ISO 1390 is given in the annex.

## 2 REFERENCES

ISO 1392, *Determination of crystallizing point – General method.*

ISO . . ., *Solid chemical products for industrial use – Sampling.*<sup>1)</sup>

## 3 SAMPLING AND PREPARATION OF TEST SAMPLE

### 3.1 Sampling

Sample in accordance with ISO . . . Additionally, the laboratory sample shall have a mass of not less than 500 g. It shall be preserved in a clean, dry, airtight, glass-stoppered bottle of such a size that it is nearly filled by the sample. If it has been necessary to seal the container, care shall be taken to avoid contaminating the contents in any way.

### 3.2 Preparation of test sample

Before carrying out the tests specified in the other parts of ISO 1390, grind the sample to a fine powder and thoroughly mix. Avoid undue exposure to moist air, which might lead to the formation of maleic acid.

## 4 DETERMINATION OF CRYSTALLIZING POINT

Use the method specified in ISO 1392.

## 5 TEST REPORT

The test report for each determination shall include the following particulars :

- a) the reference of the method used;
- b) the results and the method of expression used;
- c) any unusual features noted during the determination;
- d) any operation not included in the relevant part of ISO 1390 or in other International Standards to which reference is made, or regarded as optional.

1) In preparation.

ANNEX

ISO PUBLICATIONS RELATING TO MALEIC ANHYDRIDE FOR INDUSTRIAL USE

ISO 1390/I – General.

ISO 1390/II – Measurement of colour of molten material.

ISO 1390/III – Determination of free acidity – Potentiometric method.

ISO 1390/IV – Determination of maleic anhydride content – Titrimetric method.

ISO 1390/V – Determination of ash.

ISO 1390/VI – Determination of iron content – 2,2'-Bipyridyl photometric method.

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