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**INTERNATIONAL STANDARD**



**1389 / II**

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

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**Phthalic anhydride for industrial use — Methods of test —  
Part II : Measurement of colour of the molten material**

*Anhydride phtalique à usage industriel — Méthodes d'essai —  
Partie II : Mesurage de la coloration du produit fondu*

First edition — 1977-02-15

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ISO 1389-2:1977

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**UDC 661.73 : 620.1 : 543.8**

**Ref. No. ISO 1389/II-1977 (E)**

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

Price based on 2 pages

## 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 1389-1970 and found it technically suitable for transformation. The technical committee, however, divided the recommendation into eleven parts (ISO 1389, parts I to XI), which therefore replace ISO Recommendation R 1389-1970, to which they are technically identical.

ISO Recommendation R 1389 had been approved by the member bodies of the following countries :

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

# Phthalic anhydride for industrial use – Methods of test – Part II : Measurement of colour of the molten material

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### 1 SCOPE AND FIELD OF APPLICATION

This part of ISO 1389 specifies a method for measuring the colour, in Hazen units, of phthalic anhydride for industrial use, in the molten state.

This document should be read in conjunction with part I (see the annex).

### 2 REFERENCE

ISO 2211, *Liquid chemical products – Measurement of colour in Hazen units (platinum-cobalt scale)*.

### 3 PRINCIPLE

Measurement of colour, by the method specified in ISO 2211, of a test portion in the molten state.

### 4 REAGENTS

As specified in clause 4 of ISO 2211.

### 5 APPARATUS

As specified in clause 5 of ISO 2211, and the following :

**5.2 Two glass stirrers**, for use with the colorimetric tubes (5.1 of ISO 2211).

**5.3 Electrically heated aluminium block**, capable of being controlled at  $170 \pm 3$  °C, with holes of diameter 22 mm and minimum depth 120 mm, but such that the tops of the colorimetric tubes project above the surface of the block.

### 6 PROCEDURE

Transfer a quantity of the test sample, sufficient to reach the graduation mark after melting, into one of the colorimetric tubes (5.1 of ISO 2211). Place it in the electrically heated aluminium block (5.3), controlled at  $170 \pm 3$  °C, ensuring that the temperature remains within the specified limits. As soon as the test portion has melted, measure the colour by the method specified in ISO 2211.

### 7 EXPRESSION OF RESULTS

Report the results to the nearest 10 Hazen units. Also record the presence of any black particles, visible impurities, etc.

ANNEX

ISO PUBLICATIONS RELATING TO PHTHALIC ANHYDRIDE FOR INDUSTRIAL USE

ISO 1389/I – General.

ISO 1389/II – Measurement of colour of molten material.

ISO 1389/III – Measurement of colour stability.

ISO 1389/IV – Measurement of colour after treatment with sulphuric acid.

ISO 1389/V – Determination of free acidity – Potentiometric method.

ISO 1389/VI – Determination of phthalic anhydride content – Titrimetric method.

ISO 1389/VII – Determination of maleic anhydride content – Polarographic method.

ISO 1389/VIII – Determination of ash.

ISO 1389/IX – Determination of impurities oxidizable in the cold by potassium permanganate – Iodometric method.

ISO 1389/X – Determination of 1,4-naphthaquinone content – Colorimetric method.

ISO 1389/XI – Determination of iron content – 2,2'-Bipyridyl photometric method.

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