INTERNATIONAL STANDARD 1389/III

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

Phthalic anhydride for industrial use — Methods of test — Part III : Measurement of colour stability

Anhydride phtalique à usage industriel — Méthodes d'essai — Partie III : Mesurage de la stabilité de la coloration

First edition — 1977-02-15

UDC 661.73 : 620.1 : 543.8

Ref. No. ISO 1389/III-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

Printed in Switzerland

Phthalic anhydride for industrial use — Methods of test — Part III : Measurement of colour stability

1 SCOPE AND FIELD OF APPLICATION

This part of ISO 1389 specifies a method for measuring the colour stability of phthalic anhydride for industrial use.

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 the colour of a test portion, by the method specified in ISO 2211, after a specified heat treatment.

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 Electrically heated aluminium block, capable of being controlled at 250 ± 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.

5.3 Thermometer, mercury-in-glass type, covering a suitable range and graduated at intervals of 1 °C.

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). Close the tube with a vented cork covered with aluminium foil and fitted with the thermometer (5.3), adjusted so that the top of the bulb is 40 mm below the graduation mark on the tube. Place the tube and contents in the electrically heated aluminium block (5.2), controlled at 250 ± 3 °C, ensuring that the temperature remains within the specified limits.

Maintain the tube at this temperature for 90 min, then withdraw it from the block and allow it to cool to 150 °C. 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.