INTERNATIONAL STANDARD ISO 3682

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

Paint media — Determination of acid value — Titrimetric method

Liants pour peintures — Détermination de l'indice d'acide — Méthode titrimétrique

First edition — 1976-09-01

UDC 667.6 : 543.852.1 **Ref. No. ISO 3682-1976 (E)**

Descriptors : paints, binders (materials), chemical tests, determination, acid number, volumetric analysis.

Price based on 2 pages

FOREWORD

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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.

International Standard ISO 3682 was drawn up by Technical Committee ISO/TC 35, *Paints and varnishes*, and was circulated to the Member Bodies in January 1975.

It has been approved by the Member Bodies of the following countries :

Austria	Iran	Romania
Brazil	Ireland	South Africa, Rep. of
Bulgaria	Israel	Spain
Canada	Mexico	Sweden
Chile	Netherlands	Switzerland
France	New Zealand	Turkey
Germany	Poland	United Kingdom
India	Portugal	Yugoslavia

The Member Body of the following country expressed disapproval of the document on technical grounds :

Italy

Printed in Switzerland

Paint media — Determination of acid value — Titrimetric method

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a titrimetric method for the determination of the acid value of paint media. It is not applicable to phenolic resins.

2 REFERENCE

ISO 842, *Raw materials for paints and varnishes — Sampling.*

3 DEFINITION

acid value : The number of milligrams of potassium hydroxide (KOH) required to neutralize the free acids contained in 1 g of the product.

NOTE — If free acid anhydrides are present in the paint medium, as in the case of certain polyester resins, the alcoholic potassium hydroxide solution reacts only partially with the anhydrides; this, however, is generally of little importance with most paint media because of the small amount of free anhydrides present.

4 SAMPLING

A representative sample of the product to be tested shall be taken as descibed in ISO 842.

5 REAGENTS

During the analysis, use only reagents of recognized analytical reagent grade.

5.1 Solvent mixture, consisting of 2 parts by volume of toluene and 1 part by volume of ethanol, at least 95 % (*V/V*),[1] if not otherwise agreed or specified. Neutralize the solvent mixture with the 0,1 N potassium hydroxide solution (5.2) prior to use.

5.2 Potassium hydroxide, 0,1 N standard volumetric solution in ethanol 95 % (*V/V*),[1] or in methanol, free from carbonates, standardized against potassium hydrogen phthalate.

5.3 Phenolphthalein, indicator solution, 10 g/l in ethanol 95 % (*V/V*), or other suitable indicator, for example bromothymol blue, 10 g/l in ethanol 95 % (*V/V*).

6 APPARATUS

Ordinary laboratory apparatus and

6.1 Conical flask, capacity 250 ml.

6.2 Burette, capacity 50 ml.

If required :

6.3 Device for potentiometric titration, with glass electrode and reference electrode.

6.4 Magnetic stirrer.

7 PROCEDURE

7.1 Test portion

The mass of the test portion depends on the acid value to be expected (approximate values are given in the table). This mass shall be chosen so that the volume of the potassium hydroxide solution (5.2) is in the range 10 to 30 ml.

Weigh, to the nearest 0,001 g, the test portion into the conical flask (6.1).

Expected acid value	Mass of test portion
mg KOH/g	g
up to 10	10
above 10 to 25	5
above 25 to 50	2,5
above 50 to 150	1
above 150	0,5

1) If denatured alcohol, or alcohol of other quality, is used its suitability for the test should be checked.