

**Plastid. Fenoolvaigud. Vaba formaldehüüdi sisalduse määramine. Hüdroksüülamiinvesinikkloriid-meetod**

Plastics - Phenolic resins - Determination of free-formaldehyde content - Hydroxylamine hydrochloride method

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 9397:2000 sisaldab Euroopa standardi EN ISO 9397:1997 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 11.01.2000 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on .

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 9397:2000 consists of the English text of the European standard EN ISO 9397:1997.

This standard is ratified with the order of Estonian Centre for Standardisation dated 11.01.2000 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text .

The standard is available from Estonian standardisation organisation.

ICS 83.080.10

Võtmesõnad: fenoplastid, formaldehüüd, keemiline analüüs, plastid, sisalduse määramine, termokõvenevad vaigud,

Ingliskeelsed võtmesõnad: chemical analysis, determination of content, formaldehyde, phenoplasts, plastics, thermosetting resins,

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EUROPEAN STANDARD

EN ISO 9397

NORME EUROPÉENNE

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Descriptors: see ISO document

English version

**Plastics - Phenolic resins - Determination of  
free-formaldehyde content - Hydroxylamine  
hydrochloride method (ISO 9397:1995)**

Plastiques - Résines phénoliques - Dosage du  
formaldéhyde libre - Méthode au chlorhydrate  
d'hydroxylamine (ISO 9397:1995)

Kunststoffe - Phenolharze - Bestimmung des  
Gehaltes an freiem Formaldehyd -  
Hydroxylaminhydrochlorid-Methode  
(ISO 9397:1995)

This European Standard was approved by CEN on 1997-01-05. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

### **Foreword**

The text of the International Standard from Technical Committee ISO/TC 61 "Plastics" of the International Organization for Standardization (ISO) has been taken over as an European Standard by Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by IBN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 1997, and conflicting national standards shall be withdrawn at the latest by August 1997.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

### **Endorsement notice**

The text of the International Standard ISO 9397:1995 has been approved by CEN as a European Standard without any modification.

# INTERNATIONAL STANDARD

**ISO**  
**9397**

Second edition  
1995-05-01

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## **Plastics — Phenolic resins — Determination of free-formaldehyde content — Hydroxylamine hydrochloride method**

*Plastiques — Résines phénoliques — Dosage du formaldéhyde libre —  
Méthode au chlorhydrate d'hydroxylamine*



Reference number  
ISO 9397:1995(E)

## 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.

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.

International Standard ISO 9397 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 12, *Thermosetting materials*.

This second edition cancels and replaces the first edition (ISO 9397:1989), of which it constitutes a minor revision.

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# Plastics — Phenolic resins — Determination of free-formaldehyde content — Hydroxylamine hydrochloride method

## 1 Scope

This International Standard specifies a method of chemically determining free formaldehyde in phenolic resins by potentiometric titration, in aqueous or organic solution. The method is applicable to resins with free-formaldehyde contents up to and including 15 % (*m/m*). For free-formaldehyde contents between 15 % (*m/m*) and 30 % (*m/m*), it may be necessary to adjust the concentrations of the standard volumetric solutions used accordingly. This method must not be used in the presence of hexamethylenetetramine.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards

are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 9020:1994, *Binders for paints and varnishes — Determination of free-formaldehyde content of amino resins — Sodium sulfite titrimetric method*.

ISO 11402:1993, *Plastics — Condensation resins — Determination of free formaldehyde*.

## 3 Choice of method

The methods available for the determination of free formaldehyde in condensation resins are summarized in table 1.

**Table 1 — Choice of method**

Method	Suitable for testing of	To be carried out in accordance with
Hydroxylamine hydrochloride method	Phenolic resins and furan resins (unmodified with urea or melamine resin)	ISO 9397
Sulfite method	Urea resins, melamine resins, furan resins, urea-melamine resins and furan-urea resins	ISO 9020
KCN method	Melamine-phenol resins, urea-phenol resins and urea-melamine-phenol resins	ISO 11402