

**Plastics - Epoxy compounds - Determination of epoxy equivalent**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 3001:2001 sisaldab Euroopa standardi EN ISO 3001:1999 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 18.06.2001 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 3001:2001 consists of the English text of the European standard EN ISO 3001:1999.

This standard is ratified with the order of Estonian Centre for Standardisation dated 18.06.2001 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

The standard is available from Estonian standardisation organisation.

ICS 83.080.10

### Standardite reprodutseerimis- ja levitamiseõigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:  
Aru 10 Tallinn 10317 Eesti; [www.evs.ee](http://www.evs.ee); Telefon: 605 5050; E-post: [info@evs.ee](mailto:info@evs.ee)

### Right to reproduce and distribute Estonian Standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without permission in writing from Estonian Centre for Standardisation.

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation:  
Aru str 10 Tallinn 10317 Estonia; [www.evs.ee](http://www.evs.ee); Phone: +372 605 5050; E-mail: [info@evs.ee](mailto:info@evs.ee)

ICS 83.080.00

English version

Plastics

Epoxy compounds

Determination of epoxy equivalent  
(ISO 3001 : 1999)

Plastiques – Compositions  
époxydiques – Détermination de  
l'équivalent époxy (ISO 3001 : 1999)

Kunststoffe – Epoxid-Verbindungen –  
Bestimmung des Epoxid-Äquivalents  
(ISO 3001 : 1999)

This European Standard was approved by CEN on 1999-01-25.

CEN members are bound to comply with the CEN/GENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

**CEN**

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

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

## Foreword

International Standard

ISO 3001 : 1999 Plastics – Epoxy compounds – Determination of epoxy equivalent, which was prepared by ISO/TC 61 'Plastics' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 249 'Plastics', the Secretariat of which is held by IBN, as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by August 1999 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

## Endorsement notice

The text of the International Standard ISO 3001 : 1999 was approved by CEN as a European Standard without any modification.

This document is a preview generated by EVS

## 1 Scope

This International Standard specifies a method for the determination of the epoxy equivalent and is applicable to all epoxy compounds. In the case of epoxyamines, it is necessary to apply the modification specified in annex A.

## 2 Definitions

For the purposes of this International Standard, the following definitions apply.

### 2.1

#### **epoxy equivalent**

the mass of resin, in grams, which contains one mole of epoxy groups

### 2.2

#### **epoxy index**

the number of moles of epoxy groups contained in 1 kg of resin

## 3 Principle

The epoxy groups in a test portion are reacted with nascent hydrogen bromide produced by the action of 0,1 mol/l standard volumetric perchloric acid solution on tetraethylammonium bromide. The end-point is determined either using crystal violet as indicator or by a potentiometric method.

## 4 Reagents

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

### 4.1 Glacial acetic acid.

### 4.2 Acetic anhydride, purity > 96 %.

### 4.3 Chloroform.

### 4.4 Potassium hydrogen phthalate.

### 4.5 Crystal violet, indicator solution.

Dissolve 100 mg of crystal violet in 100 ml of glacial acetic acid (4.1).

### 4.6 Perchloric acid, 0,1 mol/l standard volumetric solution.