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## **Plastid. Proovikehade ettevalmistamine mehaanilise töötlemise teel**

Plastics - Preparation of test specimens by  
machining

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 2818:2000 sisaldab Euroopa standardi EN ISO 2818:1996 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 11.01.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 2818:2000 consists of the English text of the European standard EN ISO 2818:1996.</p> <p>This document is endorsed on 11.01.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b> Käesolev standard kehtestab üldised põhimõtted ja protseduurid, mida tuleb järgida proovikehade mehaanilisel töötlemisel ja sälgustamisel. Proovikehad võetakse vormpressimis- ja survevalumeetodil valmistatud plastidest, ekstrusioonimeetodil valmistatud lehtedest, plaatidest ja osaliselt või täielikult viimistletud toodetest.</p>	<p><b>Scope:</b></p>
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**ICS** 83.080.01

**Võtmesõnad:** mehaaniline töötlemine, plastid, proovikeha ettevalmistamine, testitavad proovikehad

ICS 83.080

Descriptors: Plastics, testing, specimens.

**English version**

**Plastics**

**Preparation of test specimens by machining  
(ISO 2818:1994)**

Plastiques – Préparation des éprouvettes  
par usinage (ISO 2818:1994)

Kunststoffe – Herstellung von Probe-  
körpern durch mechanische Bearbeitung  
(ISO 2818:1994)

This European Standard was approved by CEN on 1996-11-25.

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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.

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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

International Standard

ISO 2818:1994 Plastics – Preparation of test specimens by machining,

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 June 1997 at the latest.

In accordance with the CEN/GENELEC 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 2818:1994 was approved by CEN as a European Standard without any modification.

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## Introduction

The preparation of test specimens by machining influences the finished surfaces and, in some cases, even the internal structure of the specimens. Since test results are strongly dependent on both of these parameters, exact definitions of tools and machining conditions are required for reproducible test results with machined specimens.

## 1 Scope

This International Standard establishes the general principles and procedures to be followed when machining and notching test specimens from compression-moulded and injection-moulded plastics, extruded sheets, plates and partially finished or wholly finished products.

In order to establish a basis for reproducible machining and notching conditions, the following general standardized conditions should be applied. It is assumed, however, that the exact procedures to be used will be selected or specified by the relevant material specification or by the standards on the particular test methods. If sufficiently detailed procedures are not thus specified, it is essential that the interested parties agree on the conditions to be used.

## 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 3002-1:1982, *Basic quantities in cutting and grinding — Part 1: Geometry of the active part of cutting tools — General terms, reference systems, tool and working angles, chip breakers.*

ISO 3017:1981, *Abrasive discs — Designation, dimensions and tolerances — Selection of disc outside diameter/centre hole diameter combinations.*

ISO 3855:1977, *Milling cutters — Nomenclature.*

ISO 6104:1979, *Abrasive products — Diamond or cubic boron nitride grinding wheels and saws — General survey, designation and multilingual nomenclature.*

ISO 6106:1979, *Abrasive products — Grain sizes of diamond or cubic boron nitride.*

ISO 6168:1980, *Abrasive products — Diamond or cubic boron nitride grinding wheels — Dimensions.*

## 3 Definitions

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

### 3.1 Milling

In this machining operation, the tool has a circular primary motion and the workpiece a suitable feed motion. The axis of rotation of the primary motion retains its position with respect to the tool, independently of the feed motion (see ISO 3855). Complete dumb-bell and rectangular test specimens, as well as notches in finished specimens, may be prepared by milling.

#### 3.1.1 Geometry (see 3002-1 and figure 1)

Only a few details of the exact geometrical conditions of the milling tool and its position with respect to the workpiece given in ISO 3002-1 are relevant to this standard, as follows:

**3.1.1.1 tool-cutting-edge angle,  $\alpha_c$ :** The angle between the tool-cutting-edge plane  $P_s$  and the assumed working plane  $P_f$ , measured in the tool back plane  $P_r$ .

**3.1.1.2 tool back clearance,  $\alpha_p$ :** The angle between the flank  $A_x$  of the cutter and the tool-cutting-edge plane  $P_s$ , measured in the tool back plane  $P_p$ .