

**Teraste tähistussüsteem. Osa 1: Teras  
margitähised**

Designation systems for steels - Part 1: Steel  
names

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 10027-1:2005 sisaldab Euroopa standardi EN 10027-1:2005 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 29.09.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 10027-1:2005 consists of the English text of the European standard EN 10027-1:2005.</p> <p>This document is endorsed on 29.09.2005 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>
--	---

<p><b>Käsitlusala:</b> This European Standard specifies rules for designating steels by means of symbolic letters and numbers to express application and principal characteristics, e.g. mechanical, physical, chemical, so as to provide an abbreviated identification of steels.</p>	<p><b>Scope:</b> This European Standard specifies rules for designating steels by means of symbolic letters and numbers to express application and principal characteristics, e.g. mechanical, physical, chemical, so as to provide an abbreviated identification of steels.</p>
--	--

**ICS** 77.080.20

**Võtmesõnad:** abbreviated name, characteristics, codes, designations, distinguishing signs, identification methods, marking, materials, metals, steel products, steels, symbols, terms

English version

## Designation systems for steels - Part 1: Steel names

Systèmes de désignation des aciers - Partie 1: Désignation  
symbolique

Bezeichnungssysteme für Stähle - Teil 1: Kurznamen

This European Standard was approved by CEN on 27 June 2005.

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. 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.

This European Standard exists 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

## Contents

	Page
Foreword .....	4
<b>1 Scope .....</b>	<b>5</b>
<b>2 Normative references .....</b>	<b>5</b>
<b>3 Terms and definitions .....</b>	<b>5</b>
<b>4 Principles .....</b>	<b>5</b>
4.1 A unique steel name .....	5
4.2 Formulation of steel names .....	5
4.3 Allocation of steel names .....	5
4.4 Consultation .....	6
<b>5 Reference to product standards .....</b>	<b>6</b>
<b>6 Classification of steel names .....</b>	<b>6</b>
<b>7 Structure of steel names .....</b>	<b>6</b>
7.1 Principal symbols .....	6
7.2 Additional symbols .....	7
7.3 Steels designated according to their application and mechanical or physical properties .....	7
7.4 Steels designated according to chemical composition .....	20
Table 1 — Structural steels .....	8
Table 1 ( <i>continued</i> ) .....	9
Table 2 — Steels for pressure purposes .....	10
Table 3 — Steels for line pipe .....	11
Table 4 — Steels for engineering .....	12
Table 5 — Steels for reinforcing concrete .....	13
Table 6 — Steels for prestressing concrete .....	14
Table 7 — Steels for or in the form of rails .....	15
Table 8 — Flat products for cold forming (except those in Table 9) .....	16
Table 9 — High strength steel flat products for cold forming .....	17
Table 10 — Tin mill products (steel products for packaging) .....	18
Table 11 — Electrical steels .....	19
Table 12 - Non-alloy steels (except free cutting steels) with an average manganese content < 1 % .....	20
Table 13 — Non-alloy steels with an average manganese content ≥ 1 %, non-alloy free-cutting steels and alloy steels (except high speed steels) where the content, by weight, of every average alloying element is < 5 % .....	21

Table 14 — Stainless steels and other alloy steels (except high speed steels) where the average content by weight of at least one alloying element is $\geq 5\%$ .....	22
Table 15 — High speed steels .....	23
Table 16 — Symbols for steel products indicating special requirements .....	24
Table 17 — Symbols for steel products indicating type of coating .....	24
Table 18 — Symbols for steel products indicating treatment condition .....	25

## Foreword

This European Standard (EN 10027-1:2005) has been prepared by Technical Committee ECISS/TC 7 “Conventional designation of steel”, the secretariat of which is held by UNI.

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 February 2006, and conflicting national standards shall be withdrawn at the latest by February 2006.

This European Standard supersedes CR 10260:1998 and EN 10027-1:1992.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

## 1 Scope

**1.1** This European Standard specifies rules for designating steels by means of symbolic letters and numbers to express application and principal characteristics, e.g. mechanical, physical, chemical, so as to provide an abbreviated identification of steels.

**NOTE** In the English language the designations covered by this European Standard are known as "steel names"; in the French language as "designation symbolique"; in the German language as "Kurznamen".

**1.2** This European Standard applies to steels specified in European Standards (EN), Technical Specifications (TS), Technical Reports (TR) and CEN member's national standards.

**1.3** These rules may be applied to non-standardized steels.

**1.4** A system of numerical designation of steels known as steel numbers is specified in EN 10027-2.

## 2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 10020:2000, *Definition and classification of grades of steel*

EN 10027-2, *Designation systems for steels - Part 2: Numerical system*

EN 10079:1992, *Definition of steel products*

## 3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 10020:2000 and EN 10079:1992 apply.

## 4 Principles

### 4.1 A unique steel name

There shall be one unique steel name for each steel.

### 4.2 Formulation of steel names

Steel names allocated in accordance with this European Standard shall comprise principal symbols as specified in 7.1.

In order to avoid ambiguity, it may be necessary to supplement these principal symbols by additional symbols identifying additional characteristics of the steel or steel product, e.g. suitability for use at high or low temperatures, surface condition, treatment condition, de-oxidation. These additional symbols are given in 7.2.

Unless otherwise specified in this European Standard the symbols used in the steel name shall be written without spaces.

### 4.3 Allocation of steel names

**4.3.1** For steels specified in European Standards (EN), Technical Specifications (TS) and Technical Reports (TR), steel names shall be allocated by the ECIS Technical Committee concerned.