

This document is a preview generated by EVS

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

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 10027-1:2016 sisaldab Euroopa standardi EN 10027-1:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 10027-1:2016 consists of the English text of the European standard EN 10027-1:2016.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 26.10.2016.	Date of Availability of the European standard is 26.10.2016.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile [standardiosakond@evs.ee](mailto:standardiosakond@evs.ee).

ICS 77.080.20

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

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

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:  
Koduleht [www.evs.ee](http://www.evs.ee); telefon 605 5050; e-post [info@evs.ee](mailto:info@evs.ee)

The right to reproduce and distribute 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 a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage [www.evs.ee](http://www.evs.ee); phone +372 605 5050; e-mail [info@evs.ee](mailto:info@evs.ee)

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 15 July 2016.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

<b>Contents</b>	<b>Page</b>
European 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>
<b>4.1 A unique steel name</b> .....	<b>5</b>
<b>4.2 Formulation of steel names</b> .....	<b>5</b>
<b>4.3 Allocation of steel names</b> .....	<b>6</b>
<b>4.4 Consultation</b> .....	<b>6</b>
<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>
<b>7.1 Principal symbols</b> .....	<b>6</b>
<b>7.2 Additional symbols</b> .....	<b>7</b>
<b>7.3 Steels designated according to their application and mechanical or physical properties</b> .....	<b>7</b>
<b>7.4 Steels designated according to chemical composition</b> .....	<b>23</b>
<b>Tables</b>	
<b>Table 1 — Structural steels</b> .....	<b>8</b>
<b>Table 2 — Steels for pressure purposes</b> .....	<b>10</b>
<b>Table 3 — Steels for line pipe</b> .....	<b>12</b>
<b>Table 4 — Steels for engineering</b> .....	<b>13</b>
<b>Table 5 — Steels for reinforcing concrete</b> .....	<b>14</b>
<b>Table 6 — Steels for prestressing concrete</b> .....	<b>15</b>
<b>Table 7 — Steels for or in the form of rails</b> .....	<b>16</b>
<b>Table 8 — Flat products for cold forming (except those in Table 9)</b> .....	<b>18</b>
<b>Table 9 — High strength steel flat products for cold forming</b> .....	<b>19</b>
<b>Table 10 — Tin mill products (steel products for packaging)</b> .....	<b>21</b>
<b>Table 11 — Electrical steels</b> .....	<b>22</b>
<b>Table 12 — Non-alloy steels (except free cutting steels) with an average manganese content &lt; 1 %</b> .....	<b>23</b>
<b>Table 13 — Non-alloy steels with an average manganese content <math>\geq 1</math> %, non-alloy free-cutting steels and alloy steels (except high speed steels) where the content, by weight, of every average alloying element is &lt; 5 %</b> .....	<b>25</b>
<b>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 <math>\geq 5</math> %</b> .....	<b>27</b>
<b>Table 15 — High speed steels</b> .....	<b>29</b>
<b>Table 16 — Symbols for steel products indicating special requirements</b> .....	<b>30</b>

**Table 17 — Symbols for steel products indicating type of coating ..... 30**  
**Table 18 — Symbols for steel products indicating treatment condition ..... 31**

This document is a preview generated by EVS

## European foreword

This document (EN 10027-1:2016) has been prepared by Technical Committee ECISS/TC 100 "Iron and steel - General issues", the secretariat of which is held by BSI.

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 April 2017, and conflicting national standards shall be withdrawn at the latest by April 2017.

This document supersedes EN 10027-1:2005.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the 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 documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 10079:2007, *Definition of steel products*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 10020:2000 and EN 10079:2007 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.