

Cold rolled uncoated low carbon steel narrow strip for
cold forming - Technical delivery conditions

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 10139:2016+A1:2020 sisaldab Euroopa standardi EN 10139:2016+A1:2020 ingliskeelset teksti.	This Estonian standard EVS-EN 10139:2016+A1:2020 consists of the English text of the European standard EN 10139:2016+A1:2020.
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.
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English Version

Cold rolled uncoated low carbon steel narrow strip for cold forming - Technical delivery conditions

Feuillards non revêtus laminés à froid en aciers à bas carbone pour formage à froid - Conditions techniques de livraison

Kaltband ohne Überzug aus weichen Stählen zum Kaltumformen - Technische Lieferbedingungen

This European Standard was approved by CEN on 13 December 2015 and includes Amendment 1 approved by CEN on 4 February 2019.

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Contents

Page

European foreword.....	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	5
4 Classification and designation.....	5
5 Designation.....	5
6 Properties	6
6.1 Steel making process and chemical composition	6
6.2 Choice of properties	6
6.3 Mechanical and technological properties	6
6.4 Surface characteristics	6
6.4.1 General.....	6
6.4.2 Surface appearance	7
6.4.3 Surface finish	7
6.5 Stretcher strain marks	7
6.6 Suitability for the application of surface coating.....	7
6.7 Weldability	8
6.8 Dimensions, mass, permissible tolerances.....	8
7 Testing.....	8
7.1 Agreement on acceptance testing	8
7.2 Acceptance units and number of tests.....	8
7.3 Sampling and preparation of test pieces	9
7.4 Test methods to be followed	9
7.5 Re-tests	9
8 Marking.....	9
9 Oiling.....	9
10 Packing.....	10
11 Information to be supplied by the purchaser	10
12 Disputes	10

European foreword

This document (EN 10139:2016+A1:2020) has been prepared by Technical Committee ECISS/TC 109 “Coated and uncoated flat products to be used for cold forming”, the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by October 2020, and conflicting national standards shall be withdrawn at the latest by October 2020.

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

This document supersedes A1 EN 10139:2016 A1.

This document includes Amendment 1 approved by CEN on 2020-02-13.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

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

1 Scope

1.1 This European Standard applies to cold rolled narrow strip in coils and cut lengths in thicknesses up to 10 mm and of widths less than 600 mm, made from low carbon, unalloyed and alloyed steels in accordance with Table 1.

These products are suitable for cold forming. They are also suitable for surface coating. On the other hand, they are not suitable for hardening treatment followed by tempering.

1.2 This European Standard does not cover cold rolled flat products for which a separate standard already exists, particularly the following products:

- cold rolled non-oriented electrical steel sheet and strip delivered in the fully processed state (EN 10106);
- grain-oriented electrical steel sheet and strip delivered in the fully processed state (EN 10107);
- cold rolled electrical non-alloy and alloy steel sheet and strip delivered in the semi-processed state (EN 10341);
- cold rolled narrow steel strip for heat treatment (EN 10132-1 to -4);
- cold rolled steel flat products with higher yield strength for cold forming (EN 10268);
- cold rolled low carbon steel flat products for cold forming (EN 10130);
- cold reduced blackplate in coil form for the production of tinplate or electrolytic chromium/chromium oxide coated steel (EN 10205);
- cold rolled low carbon steel flat products for vitreous enamelling (EN 10209).

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, *Definition and classification of grades of steel*

EN 10021, *General technical delivery conditions for steel products*

EN 10027-1, *Designation systems for steels - Part 1: Steel names*

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

EN 10049, *Measurement of roughness average Ra and peak count RPc on metallic flat products*

EN 10079, *Definition of steel products*

EN 10140:2006, *Cold rolled narrow steel strip - Tolerances on dimensions and shape*

EN 10204, *Metallic products - Types of inspection documents*

EN ISO 377, *Steel and steel products - Location and preparation of samples and test pieces for mechanical testing (ISO 377:2013, Corrected version 2015-06-01)*

EN ISO 6507 (all parts), *Metallic materials — Vickers hardness test (ISO 6507)*

EN ISO 6892-1:2009, *Metallic materials - Tensile testing - Part 1: Method of test at room temperature (ISO 6892-1:2009)*

ISO 10113, *Metallic materials — Sheet and strip — Determination of plastic strain ratio*

ISO 10275, *Metallic materials — Sheet and strip — Determination of tensile strain hardening exponent*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 10079 apply.

4 Classification and designation

4.1 This European Standard specifies the grades listed in Table 1. In the case of steel grade DC01, the deoxidation method shall be left to the manufacturer's discretion. Steel grades DC03, DC04, DC05, DC06 and DC07 shall be supplied fully killed.

4.2 Products manufactured from these steels may be ordered and supplied in different delivery conditions (see Table 1) and with different surface characteristics (see 6.4 and Table 2).

4.3 For the purposes of the specifications of this European Standard, the selection of steel grade, delivery condition and surface characteristics are of the responsibility of the purchaser.

NOTE 1 In case of narrow widths, strip complying with this European Standard can also be wound in layers and supplied in the form of a bobbin wound coil.

NOTE 2 After uncoiling and shearing, strip can be supplied in cut lengths.

5 Designation

The symbol designation of the steel grades in this European Standard is in accordance with EN 10027-1 and the numerical designation is allocated in accordance with EN 10027-2.

The standard designation consists of the words narrow strip or cut lengths, followed in order by $\square A_1$ reference to European Standard EN 10140:2006 and the nominal dimensions of the product and for the steel grade $\square A_1$:

- a) reference to this European Standard, EN 10139;
- b) the symbol DC, followed by the grade designation (01, 03, 04, 05, 06 and 07);
- c) the symbol for delivery condition (see Table 1);
- d) the symbol for surface appearance (MA, MB or MC, see Table 2);
- e) the symbol for surface finish where appropriate (RN, RL, RM or RR, see 6.4.3 and Table 2).