

Hot rolled and cold rolled non-coated products of
multiphase steels for cold forming - Technical delivery
conditions

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 10338:2015 sisaldab Euroopa standardi EN 10338:2015 ingliskeelset teksti.	This Estonian standard EVS-EN 10338:2015 consists of the English text of the European standard EN 10338:2015.
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 15.07.2015.	Date of Availability of the European standard is 15.07.2015.
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.

ICS 77.140.50

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:

Aru 10, 10317 Tallinn, Eesti; koduleht www.evs.ee; telefon 605 5050; e-post 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:

Aru 10, 10317 Tallinn, Estonia; homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

Hot rolled and cold rolled non-coated products of multiphase
steels for cold forming - Technical delivery conditions

Produits plats non revêtus laminés à chaud et à froid en
aciers multiphasés pour formage à froid - Conditions
techniques de livraison

Kaltgewalzte und warmgewalzte Flacherzeugnisse ohne
Überzug aus Mehrphasenstählen zum Kaltumformen -
Technische Lieferbedingungen

This European Standard was approved by CEN on 16 April 2015.

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

Contents

Page

European foreword	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	5
4 Dimensions and tolerances	5
5 Classification and designation	6
5.1 Classification	6
5.2 Designation	6
6 Information to be supplied by the purchaser at the time of enquiry and order	6
6.1 Mandatory information	6
6.2 Options	7
7 Manufacturing process and delivery conditions	7
7.1 Manufacturing process	7
7.2 Delivery conditions	7
8 Requirements	8
8.1 Chemical composition	8
8.2 Mechanical properties	10
8.3 Surface properties	11
8.3.1 Hot rolled products	11
8.3.2 Cold rolled products	12
8.4 Suitability for surface coating	12
8.5 Weldability	12
9 Inspection	12
9.1 Types of inspection and inspection documents	12
9.2 Test units	12
9.3 Tests to be carried out	12
9.4 Sampling	13
9.5 Test methods	13
9.5.1 Tensile test	13
9.5.2 Strain hardening exponent	13
9.5.3 Bake Hardening index	13
9.5.4 Surface inspection	13
9.6 Retests	13
10 Marking	14
11 Packing	14
12 Storage and transportation	14
13 Disputes	14
Bibliography	15

European foreword

This document (EN 10338:2015) 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 January 2016, and conflicting national standards shall be withdrawn at the latest by January 2016.

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.

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

This European Standard applies to hot rolled and cold rolled non-coated steel flat products made of multiphase steels for cold forming. It covers cold rolled products of thicknesses $t < 3$ mm and hot rolled products of thicknesses $t \leq 6$ mm.

These products are delivered in sheet, wide strip, slit wide strip or cut lengths obtained from slit wide strip.

Flat products of multiphase steels for cold forming may be delivered with an electrolytic zinc coating according to EN 10152.

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 10021:2006, *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 10051, *Continuously hot-rolled strip and plate/sheet cut from wide strip of non-alloy and alloy steels - Tolerances on dimensions and shape*

EN 10079:2007, *Definition of steel products*

EN 10130, *Cold rolled low carbon steel flat products for cold forming - Technical delivery conditions*

EN 10131, *Cold rolled uncoated and zinc or zinc-nickel electrolytically coated low carbon and high yield strength steel flat products for cold forming - Tolerances on dimensions and shape*

EN 10204:2004, *Metallic products - Types of inspection documents*

EN 10325, *Steel - Determination of yield strength increase by the effect of heat treatment [Bake-Hardening-Index]*

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

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

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