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Continuously hot-dip coated steel flat products for cold forming - Technical delivery conditions

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 10/15

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EUROPEAN STANDARD
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EN 10346

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English Version

**Continuously hot-dip coated steel flat products for cold forming -
Technical delivery conditions**

Produits plats en acier revêtus en continu par immersion à
chaud pour formage à froid - Conditions techniques de
livraison

Kontinuierlich schmelztauchveredelte Flacherzeugnisse aus
Stahl - Technische Lieferbedingungen

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

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Contents

Page

European foreword	5
1 Scope	6
2 Normative References	6
3 Terms and definitions	7
4 Classification and designation	9
4.1 Classification	9
4.1.1 General	9
4.1.2 Low carbon steels for cold forming	9
4.1.3 Steels for construction	10
4.1.4 Steels with high proof strength for cold forming	10
4.1.5 Multiphase steels for cold forming	10
4.2 Designation	10
4.2.1 Steel names	10
4.2.2 Steel numbers	10
5 Information to be supplied by the purchaser	10
5.1 Mandatory information	10
5.2 Options	11
6 Manufacturing and processing	12
6.1 Manufacturing	12
6.2 Processing	12
6.2.1 Ageing	12
6.2.2 Coating appearance	12
6.2.3 Surface protection	12
7 Requirements	12
7.1 Chemical composition	12
7.2 Mechanical properties	17
7.2.1 General	17
7.2.2 Low carbon steels for cold forming	18
7.2.3 Steels for construction	20
7.2.4 Steels with high proof strength for cold forming	20
7.2.5 Multiphase steels for cold forming	22
7.3 Type of coatings and coating mass	23
7.4 Coating finish	26
7.4.1 General	26
7.4.2 Zinc coated products (Z)	26
7.4.3 Zinc-iron alloy coated products (ZF)	26
7.4.4 Zinc-aluminium coated products (ZA)	26
7.4.5 Zinc-magnesium coated products (ZM)	26
7.4.6 Aluminium-zinc coated products (AZ)	26
7.4.7 Aluminium-silicon coated products (AS)	26
7.5 Surface quality	27
7.5.1 General	27
7.5.2 Types of surface qualities	29
7.5.3 Roughness	29
7.6 Surface treatment (surface protection)	29
7.6.1 General	29
7.6.2 Chemical passivation (C)	30
7.6.3 Oiling (O)	30

7.6.4	Chemical passivation and oiling (CO).....	30
7.6.5	Phosphating (P)	30
7.6.6	Sealing (S)	30
7.7	Coil breaks and bends (kinks)	30
7.7.1	Freedom from coil breaks.....	30
7.7.2	Bends (kinks) by winding on coiler drums	31
7.8	Stretcher strains	31
7.9	Coating mass	31
7.10	Adhesion of coating	31
7.11	Surface condition	31
7.12	Tolerances on dimensions and shape	31
7.13	Suitability for further processing.....	32
8	Inspection.....	32
8.1	Types of inspection and inspection documents	32
8.2	Test units.....	32
8.3	Tests to be carried out.....	32
8.4	Sampling.....	32
8.5	Test methods	33
8.5.1	Tensile test.....	33
8.5.2	Plastic strain ratio and hardening exponent	33
8.5.3	Bake Hardening index.....	33
8.5.4	Surface inspection	33
8.5.5	Coating mass	34
8.6	Retests.....	34
9	Marking	34
10	Packing	34
11	Storage and transportation	35
Annex A	(normative) Reference method for determination of the zinc, zinc-iron, zinc-aluminium, zinc-magnesium and aluminium-zinc coating mass	36
A.1	Principle.....	36
A.2	Reagent and preparation of the solution	36
A.2.1	Reagent.....	36
A.2.2	Preparation of the solution.....	36
A.3	Apparatus	36
A.4	Procedure	36
Annex B	(normative) Reference method for determination of the aluminium-silicon coating mass	37
B.1	Principle.....	37
B.2	Reagents.....	37
B.3	Procedure	37
B.3.1	Samples	37
B.3.2	Method	37
B.4	Evaluation.....	37
Annex C	(normative) Method for determination of the mass of the Al-Fe-Si alloy layer	38
C.1	Principle.....	38
C.2	Reagents.....	38
C.2.1	Tin (II) chloride solution.....	38

C.3	Procedure	38
C.3.1	Removal of the non-alloy layer.....	38
C.3.2	Determination of alloy layer.....	38
C.4	Evaluation.....	38
Annex D (informative)	Technical changes from the previous edition.....	39
D.1	Introduction	39
D.2	Technical changes.....	39
Bibliography		41

European foreword

This document (EN 10346:2015) 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.

This document supersedes EN 10346:2009.

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 specifies requirements for continuously hot-dip coated products made of low carbon steels for cold forming, of steels for construction and of steels with high proof strength for cold forming coated with zinc (Z), zinc-iron alloy (ZF), zinc-aluminium alloy (ZA), aluminium-zinc alloy (AZ), aluminium-silicon alloy (AS) or zinc-magnesium alloy (ZM) and for continuously hot-dip coated products made of multiphase steels for cold forming coated with zinc (Z), zinc-iron alloy (ZF), zinc-aluminium alloy (ZA) or zinc-magnesium alloy (ZM) in thicknesses of $0,20 \text{ mm} \leq t < 3,0 \text{ mm}$.

By agreement at the time of enquiry and order, this European Standard is applicable to continuously hot-dip coated flat products of an expanded validity range defined for thicknesses $t < 0,20 \text{ mm}$ or in thicknesses $3,0 \text{ mm} \leq t \leq 6,5 \text{ mm}$ with agreed mechanical properties and test specimens, adhesion of coating and surface condition requirements.

The thickness is the final thickness of the delivered product after coating.

This document applies to strip of all widths and to sheets cut from it ($\geq 600 \text{ mm}$ width) and cut lengths ($< 600 \text{ mm}$ width).

NOTE 1 Products coated with (pure) aluminium can also be available, but are not covered by this European standard.

NOTE 2 The products covered by this European Standard are used where cold formability, high strength, a defined minimum yield strength and/or corrosion resistance are the most important factors. Corrosion resistance of the product is proportional to the coating thickness, hence to its mass (see also 7.3.2). The products covered by this European Standard can be used as substrates for organic coated flat products specified in EN 10169 for building and general engineering applications.

NOTE 3 By agreement at the time of enquiry and order, this European Standard is applicable to other continuously hot-dip coated hot rolled steel flat products (e.g. in accordance with EN 10149-2).

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 606, *Bar coding - Transport and handling labels for steel products*

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 R_a and peak count RP_c on metallic flat products*

EN 10079:2007, *Definition of steel products*

EN 10143, *Continuously hot-dip coated steel sheet and strip - 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 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*

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