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Interested committees:

Title: Draft BS EN 10249-1 Cold formed steel sheet piles. Part 1: Technical delivery conditions.

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- iii) requires additional national guidance or information

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

English Version

Cold formed steel sheet piles - Part 1: Technical delivery conditions

Palplanches profilées à froid en acier - Partie 1 :
Conditions techniques de livraison

Kaltgeformte Spundbohlen aus Stahl - Teil 1:
Technische Lieferbedingungen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 459/SC 3.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (prEN 10249-1:2022) has been prepared by Technical Committee CEN/TC 459 "ECISS – European Committee for Iron and Steel Standardization"¹, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 10249-1:1995.

In comparison with the previous edition, the following technical modifications have been made:

- a) Restructuring of the standard;
- b) Updating of the normative references;
- c) New definitions 3.1 and 3.3;
- d) Specification of grades from EN 10149-2 (S355MC, S420MC) and EN 10149-3 (S355NC, S420NC) suitable for cold forming;
- e) Modification concerning the maximum values for the chemical composition;
- f) Addition of 7.4.2 for formability and flame straightening, 7.4.3 dedicated for hot-dip zinc-coating and 7.8 for load bearing capacity;
- g) New wording for Clauses 8, 9 and 10 for inspection and testing;
- h) Addition of Clause 12 on the complaints;
- i) Removal of the former Annexes A and B on Euronorms and equivalent designations;
- j) Addition of the Annexes A, B and C.

EN 10249 consists of the following parts, under the general title *Cold formed steel sheet piles*:

- *Part 1: Technical delivery conditions*
- *Part 2: Tolerances on dimensions and shape*

A further standard prEN 10376 with the title *Cold formed steel sheet piles – General (Characteristics, evaluation of conformity and marking)* is in preparation and can be used together with EN 10249 after publication.

¹ Through its sub-committee SC 5 "Steels for heat treatment, alloy steels, free-cutting steels and stainless steels" (secretariat: DIN).

1 Scope

This document specifies the requirements for cold formed steel sheet piles produced from hot rolled strip or sheet with a thickness equal to or greater than 3 mm in respect of its chemical composition, mechanical properties and conditions of delivery.

The products specified are for general, structural and civil engineering works. The types of steel sheet piles covered by this document are: Z-shaped, Omega-shaped and trench sheets. The requirements in respect of tolerances on shape and dimensions are specified in Part 2 of this document.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1011-2, *Welding – Recommendations for welding of metallic materials – Part 2: Arc welding of ferritic steels*

EN 1993-5, *Eurocode 3 - Design of steel structures - Part 5: Piling*

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

EN 10021:2006, *General technical delivery conditions for steel products*

EN 10025-2, *Hot rolled products of structural steels – Part 2: Technical delivery conditions for non-alloy structural steels*

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

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

EN 10079:2007, *Definition of steel products*

EN 10149-2, *Hot rolled flat products made of high yield strength steels for cold forming - Part 2: Technical delivery conditions for thermomechanically rolled steels*

EN 10149-3, *Hot rolled flat products made of high yield strength steels for cold forming - Part 3: Technical delivery conditions for normalized or normalized rolled steels*

EN 10168, *Steel products - Inspection documents - List of information and description*

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

EN 10249-2, *Cold formed sheet piling of non alloy steels - Part 2: Tolerances on shape and dimensions*

CEN/TR 10261, *Iron and steel - European standards for the determination of chemical composition*

CEN/TR 10347, *Guidance for forming of structural steels in processing*

EN ISO 148-1, *Metallic materials - Charpy pendulum impact test - Part 1: Test method (ISO 148-1)*

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

EN ISO 1461, *Hot dip galvanized coatings on fabricated iron and steel articles - Specifications and test methods (ISO 1461)*

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

EN ISO 14284, *Steel and iron - Sampling and preparation of samples for the determination of chemical composition (ISO 14284)*

EN ISO 14713-2, *Zinc coatings - Guidelines and recommendations for the protection against corrosion of iron and steel in structures - Part 2: Hot dip galvanizing (ISO 14713-2)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 10020:2000, EN 10021:2006, EN 10079:2007 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

product range

group of products produced by one manufacturer for which the test results for one or more characteristics from any one product within the range are valid for all other products within this range

3.2

cold-formed steel sheet pile

product made by cold forming on a rolling machine or on a brake press; the form of the product is such that when threading their interlocks, they constitute a continuous sheet pile structure

3.3

trench steel sheet pile

product made by cold forming on a rolling machine or on a brake press, without interlocks; the form of the product is such that when overlapping the profiles ends, they constitute a sheet pile structure

4 Classification and designation

4.1 Classification

4.1.1 Main quality classes

The steel grades specified in this document shall be classified as non-alloy quality steels according to EN 10020.

4.1.2 Grades and qualities

This document specifies seven steel grades suitable for cold forming according to the following standards:

- EN 10025-2 – S235JRC, S275JRC, S355J0C;
- EN 10149-2 – S355MC, S420MC;