

## **Cold formed sheet piling of non alloy steels – Part 1: Technical delivery conditions**

The European Standard EN 10 249-1:1995 has the status of a Swedish Standard. This document contains the official English version of EN 10 249-1:1995.

Swedish Standards corresponding to documents referred to in this Standard are listed in "Catalogue of Swedish Standards", annually issued by SIS. The Catalogue lists, with reference number and year of Swedish approval, International and European Standards approved as Swedish Standards as well as other Swedish Standards.

## **Kallformade spontplankor av olegerade stål – Del 1: Tekniska leveransbestämmelser**

Europastandarden EN 10 249-1:1995 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 10 249-1:1995.

Motsvarigheten och aktualiteten i svensk standard till de publikationer som omnämns i denna standard framgår av "Katalog över svensk standard", som årligen ges ut av SIS. I katalogen redovisas internationella och europeiska standarder som fastställts som svenska standarder och övriga gällande svenska standarder.



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN 10249-1

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Descriptors: iron -and steel products, metal sections, sheet pilings, steels, unalloyed steels,  
chemical composition, grades: quality, classification, designation, mechanical properties,  
tests, inspections, marking

English version

**Cold formed sheet piling of non alloy steels –  
Part 1: Technical delivery conditions**

Palplanches profilées à froid en aciers non alliés –  
Partie 1: Conditions techniques de livraisons

Kaltgeformte Spundbohlen aus unlegierten  
Stählen – Teil 1: Technische Lieferdingungen

This European Standard was approved by CEN on 1995-05-05. 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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

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## **Foreword**

This European Standard was prepared by SC4 "Sheet piling" of Technical Committee ECISS/TC10 "Structural steels - Qualities" the secretariat of which is held by NNI.

EN 10249 is composed of two parts :

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

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 December 1995, and conflicting national standards shall be withdrawn at the latest by December 1995.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

## 1 Scope

This part of this European Standard specifies the requirements for cold formed non alloy steel sheet piling produced from hot rolled strip or sheet with a thickness equal to or greater than 2 mm in respect of its chemical composition, mechanical and technological properties and delivery conditions.

The products specified are for general, structural and civil engineering works.

Requirements concerning the tolerances on shape and dimensions are specified in Part 2 of this European Standard.

## 2 Normative references

This European Standard incorporates by dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

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|----------------------|--|
| <b>EN 10002-1</b>    | <b>Metallic materials - Tensile testing - Part 1 : Method of test (at ambient temperature).</b>  |
| <b>EN 10020</b>      | <b>Definition and classification of grades of steel.</b>   |
| <b>EN 10021</b>      | <b>General technical delivery requirements for steel and steel products.</b>   |
| <b>EN 10025</b>      | <b>Hot rolled products in non-alloy steels for general structural applications - Technical delivery conditions.</b>  |
| <b>EN 10027-1</b>    | <b>Designation system for steel. Part 1 : Steel names, principal symbols.</b>  |
| <b>EN 10027-2</b>    | <b>Designation system for steel. Part 2 : Steel numbers.</b>   |
| <b>EN 10079</b>      | <b>Definition of steel products.</b>   |
| <b>pr EN 10111</b>   | <b>Hot rolled non coated mild unalloyed sheet and strip for cold forming. Technical delivery conditions</b>  |
| <b>EN 10113-2</b>    | <b>Hot rolled products in weldable fine grain structural steels. Part 2 : Delivery conditions for normalized/normalized rolled steels.</b>                 |
| <b>EN 10113-3</b>    | <b>Hot rolled products in weldable fine grain structural steels. Part 3 : Delivery conditions for thermomechanical rolled steels.</b>                      |
| <b>pr EN 10149-2</b> | <b>Hot rolled flat products made of high yield strength steels for cold forming. Part 2 : Delivery conditions for thermomechanical rolled steels.</b>      |
| <b>pr EN 10149-3</b> | <b>Hot rolled flat products made of high yield strength steels for cold forming. Part 3 : Delivery conditions for normalized/normalized rolled steels.</b> |
| <b>EN 10204</b>      | <b>Metallic products. Types of inspection documents.</b>   |
| <b>EN 10249-2</b>    | <b>Cold formed sheet piling of non alloy steels. Part 2 :Tolerances on shape and dimensions.</b>   |

- ECISS/IC 10** Designation system for steel. Additional symbols for steel names.
- EU 18 1)** Selection and preparation of samples and test pieces for steel and iron and steel products.
- EU 168 1)** Iron and steel products - Inspection documents - Contents.

### **3 Definitions**

For the purpose of this European Standard, the definitions in EN 10020, EN 10021 and EN 10079 shall apply.

Furthermore, the following definition applies :

**cold formed sheet piling** : Products made by cold forming on a rolling machine ; the form of the product is such that when interlocking their joints or overlapping the profiles ends, they constitute a continuous sheet piling structure.

### **4 Information to be supplied by the purchaser**

#### **4.1 General**

The following information shall be supplied by the purchaser, at the time of the enquiry and order :

- a) details of the product form, length, quantity and any further processing work that is required, e.g. surface treatment,
- b) the designation of the product (in accordance with 6.2),
- c) whether products have to be submitted to inspection and testing and if inspection and testing is required, which type of inspection and which inspection document is required (see 8.1.2).

Where no specific choice is made by the purchaser concerning a) and b), the supplier shall refer back to the purchaser.

**NOTE** : It is recommended that the manufacturer be informed by the purchaser at the time of the order , if the purchaser intends to carry out any surface treatment on the product after delivery.

#### **4.2 Options**

A number of options are specified in clause 10. In the event that the purchaser does not indicate a requirement to implement any of these options, the product shall be supplied in accordance with the basic specification.

### **5 Mass of steel**

The calculated mass shall be determined using a conventional volumetric mass of 7,85 kg/dm<sup>3</sup>.

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1) Until these EURONORMS are transformed into European Standards, they may be either implemented as referenced in this European Standard or the corresponding national standard given in annex A may be implemented in their place.

## **6 Classification and designation**

### **6.1 Classification**

This European Standard considers three of the steel grades defined by EN 10025 : S235JRC, S275JRC and S355J0C (grades suitable for cold forming).

When agreed at the time of the enquiry and order, other grades defined by EN 10025, pr EN 10111, EN 10113 Part 2 and Part 3 and pr EN 10149 Part 2 and Part 3 may be delivered.

Option 1, see 10.2.

### **6.2 Designation**

**6.2.1** Steel names <sup>2)</sup> are assigned to steel grades in accordance with EN 10027-1 and IC 10. Steel numbers are allocated to steel grades in accordance with EN 10027-2.

**6.2.2** The products covered by this European Standard shall be designated in the following sequence :

- a) the name of the product, i.e. "Sheet piling",
- b) the number of this European Standard, i.e. EN 10249,
- c) the steel name or number.

**EXAMPLE :** Sheet piling EN 10249-S235JRC or Sheet piling EN 10249-1.0120 indicates a sheet piling in accordance with EN 10249 made of steel S235JRC (Steel number 1.0120).

## **7 Technical requirements**

### **7.1 Steel manufacturing process**

**7.1.1** The steel manufacturing process shall be at the manufacturer's option. Where specified at the time of the enquiry and order, the steel manufacturing process shall be reported to the purchaser.

Option 2, see 10.3.

**7.1.2** The method of deoxidation shall be at the discretion of the manufacturer, except that rimming steel shall not be permitted.

### **7.2 Delivery conditions**

Unless otherwise agreed, sheet piles shall be delivered in the as cold formed condition.

Option 3, see 10.4.

### **7.3 Chemical composition**

The chemical compositions for both the ladle and the product analyses shall comply with the maximum values given in table 2 of EN 10025 or with the values which apply to the grade agreed

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<sup>2)</sup> Former national designations (steel names) are listed in annex B.