

Aluminium and aluminium alloys — Coil coated sheet and strip for general applications — Specifications

The European Standard EN 1396 : 1996 has the status of a
British Standard

ICS 77.150.10

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The preparation of this British Standard was entrusted to Technical Committee NFE/35, Light metals and their alloys, upon which the following bodies were represented:

- Aluminium Federation
- Aluminium Stockholders' Association
- Association of Light Alloy Refiners Limited
- Magnesium Industry Council
- Ministry of Defence

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

- Association of British Welded Aluminium Tube Makers
- British Foundry Association
- British Investment Casting Trade Association
- Institution of Structural Engineers
- Light Metal Founders' Association
- Metal Packaging Manufacturers' Association
- Society of Motor Manufacturers and Traders Limited

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National foreword

This British Standard has been prepared by Technical Committee NFE/35 and is the English language version of EN 1396 : 1996 *Aluminium and aluminium alloys — Coil coated sheet and strip for general applications — Specifications*, published by the European Committee for Standardization (CEN).

Cross-references

Publication referred to	Corresponding British Standard
	BS EN 485 <i>Aluminium and aluminium alloys — Sheet, strip and plate</i>
EN 485-1 : 1993	Part 1 : 1994 <i>Technical conditions for inspection and delivery</i>
EN 485-4 : 1993	Part 4 : 1994 <i>Tolerances on shape and dimensions for cold-rolled products</i>
EN 515 : 1993	BS EN 515 : 1993 <i>Aluminium and aluminium alloys — Wrought products — Temper designation</i>
EN 541 : 1995	BS EN 541 : 1995 <i>Aluminium and aluminium alloys — Rolled products for cans, closures and lids — Specifications</i>
	BS EN 573 <i>Aluminium and aluminium alloys — Chemical composition and form of wrought products</i>
EN 573-3 : 1994	Part 3 : 1995 <i>Chemical composition</i>
	BS EN 10002 <i>Tensile testing of metallic materials</i>
EN 10002-1 : 1990	Part 1 : 1990 <i>Method of test at ambient temperature</i>
ISO 2360 : 1982	BS EN ISO 2360 : 1995 <i>Non-conductive coatings on non-magnetic basis metals — Measurement of coating thickness — Eddy current method</i>
ISO 2409 : 1992	BS EN ISO 2409 : 1995 <i>Paints and varnishes — Cross-cut test</i>
	BS 3962 <i>Methods of test for finishes for wooden furniture</i>
ISO 2813 : 1994	Part 1 : 1980 <i>Assessment of low angle glare by measurement of specular gloss at 85°</i>
ISO 3668 : 1976	BS 3900 : Part D1 : 1978 <i>Visual comparison of the colour of paints</i>

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 16, an inside back cover and a back cover.

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Descriptors: Aluminium, aluminium alloys, metal plates, steel strips, coatings, thickness, specifications, inspection, delivery, characteristics, tests, marking

English version

Aluminium and aluminium alloys — Coil coated sheet and strip for general applications — Specifications

Aluminium et alliages d'aluminium — Tôles et bandes revêtues en bobine pour applications générales — Specifications

Aluminium und Aluminiumlegierungen — Bandbeschichtete Bleche und Bänder für allgemeine Anwendungen — Spezifikationen

This European Standard was approved by CEN on 1996-10-25. 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.

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 Central Secretariat has the same status as the official versions.

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CEN

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

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 132, Aluminium and aluminium alloys, of which the Secretariat 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 May 1997, and conflicting national standards shall be withdrawn at the latest by May 1997.

Within its programme of work, Technical Committee CEN/TC 132 entrusted CEN/TC 132/WG 7, Sheet, strip and plate, to prepare the following standard:

EN 1396 *Aluminium and aluminium alloys — Coil coated sheet and strip for general applications — Specifications*

According to the CEN/CENELEC Internal Regulations, the national standards organizations of 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 and the United Kingdom.

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Introduction

Organic coated aluminium and aluminium alloy flat products may be used to advantage in cases where corrosion resistance and decorative appearance are of primary importance. They have applications throughout the flat products processing industry, e.g. in the building, automotive, caravans, appliances, fabricating and packaging industries.

Organic coated aluminium and aluminium alloy flat products may be delivered in numerous types and grades, depending on the base material used (the various grades of aluminium), on the coating material and types of coating and on the requirements for the surface appearance and the formability.

The properties of the products may vary within greater or smaller limits depending on the choice and combination of properties required. It is therefore not practicable to specify in detail minimum requirements for all properties for all types of products.

Minimum requirements not specified in this European Standard and deemed necessary for successful use of the product should be agreed between producer and purchaser at the time of ordering; using, as appropriate, the guidelines given in annex C.

Guidelines for proper storage and subsequent processing of organic coated aluminium flat products are given in annex D.

1 Scope

This European Standard specifies the particular requirements for wrought aluminium and aluminium alloys in the form of coil coated sheet and strip for general applications. This product is generally supplied in thicknesses up to 2,0 mm but thicknesses up to 3,0 mm are also available.

It applies to cold-rolled aluminium and aluminium alloy strip coated by the coil coating process, either in the final width or slit afterwards, and to sheet obtained from such strip.

It does not apply to coil coated sheet and strip used for special applications such as cans, closures and lids which are dealt with in EN 541.

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.

EN 485-1 *Aluminium and aluminium alloys — Sheet, strip and plate — Part 1: Technical conditions for inspection and delivery*

EN 485-4 *Aluminium and aluminium alloys — Sheet, strip and plate — Part 4: Tolerances on shape and dimensions for cold-rolled products*

EN 515 *Aluminium and aluminium alloys — Wrought products — Temper designations*

EN 541 *Aluminium and aluminium alloys — Rolled products for cans, closures and lids — Specifications*

EN 573-3 *Aluminium and aluminium alloys — Chemical composition and form of wrought products — Part 3: Chemical composition*

EN 10002-1 *Metallic materials — Tensile testing — Part 1: Method of test (at ambient temperature)*

ISO 2360 *Non-conductive coatings on non-magnetic basis metal — Measurement of coating thickness — Eddy current method*

ISO 2409 *Paints and varnishes — Cross-cut test*

ISO 2813 *Paints and varnishes — Measurement of specular gloss of non-metallic paint films at 20 degrees, 60 degrees and 85 degrees*

ISO 3668 *Paints and varnishes — Visual comparison of the colour of paints*

3 Definitions

Sheet, strip, cold rolled sheet and strip, inspection lot, sample, specimen, test-piece and test are defined in EN 485-1.

For the purposes of this standard the following definitions apply.

3.1 aluminium

Metal with a minimum content of 99,0 % by mass of aluminium, provided that the content by mass of any other element does not exceed the following limits :

- iron + silicon contents not greater than 1,0 %;
- other element contents not greater than 0,10 % each, with the exception of copper which is permitted a content of up to 0,20 % provided that neither the chromium nor the manganese content exceeds 0,05 %.

3.2 aluminium alloy

Metallic substance in which aluminium predominates by mass over each of the other elements, provided that the specified limit contents for the other elements are such that the foregoing definition for aluminium does not apply.

3.3 metal substrate

Base material from cold rolled aluminium or aluminium alloy strip.