
Cold-reduced carbon steel sheet of structural quality

*Tôles en acier au carbone laminées à froid, de qualité destinée à la
construction*



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 4997 was prepared by Technical Committee ISO/TC 17, *Steel*, Subcommittee SC 12, *Continuous mill flat rolled products*.

This fourth edition cancels and replaces the third edition (ISO 4997:1999), which has been technically revised.

Cold-reduced carbon steel sheet of structural quality

1 Scope

This International Standard applies to cold-reduced steel sheet of structural quality in grades CR220, CR250, CR320 and CH550, usually without the use of microalloying elements. The product is intended for structures that may include bolting, riveting and welding. It is generally used in the delivered condition for fabricating purposes, such as bending, forming or welding.

This product is commonly produced in thicknesses from 0,36 mm up to 3 mm and in widths of 600 mm and over, in coils and cut lengths.

Cold-reduced sheet less than 600 mm wide may be slit from wide sheet and will be considered as sheet.

This International Standard does not cover steels designated as commercial quality or drawing qualities (covered in ISO 3574), cold-reduced carbon steel sheet according to hardness requirements (covered in ISO 5954), cold-reduced steel sheet of higher strength with improved formability (covered in ISO 13887), or cold-reduced steel sheet of high tensile strength and low yield point with improved formability (covered in ISO 14590).

2 Normative references

The following referenced documents are indispensable for the application 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.

ISO 6892, *Metallic materials — Tensile testing at ambient temperature*

ISO 16162, *Continuously cold-rolled steel sheet products — Dimensional and shape tolerances*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

microalloying elements

elements such as niobium, vanadium, titanium, etc, added singly or in combination to obtain higher strength levels combined with better formability, weldability and toughness compared to non-alloyed steels produced to equivalent strength levels

3.2

cold-reduced steel sheet (grades CR220, CR250 and CR320)

product obtained from hot-rolled descaled steel sheet by cold reducing to the required sheet thickness followed by annealing to recrystallize the grain structure

NOTE 1 This annealed product is normally supplied skin-passed (see 3.3) but may be supplied annealed-last (i.e. without a skin pass), if specified by the purchaser on his order.

NOTE 2 CH550 is a product which has not been annealed after reduction to the specified thickness.