



National Standards Authority of Ireland

IRISH STANDARD

I.S. EN 10083-2:2006

ICS 77.140.10

**STEELS FOR QUENCHING AND TEMPERING -
PART 2: TECHNICAL DELIVERY CONDITIONS
FOR NON ALLOY STEELS**

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Aciers pour trempe et revenu - Partie 2: Conditions techniques de livraison des aciers non alliés

Vergütungsstähle - Teil 2: Technische Lieferbedingungen für unlegierte Stähle

This European Standard was approved by CEN on 30 June 2006.

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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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Foreword

This document (EN 10083-2:2006) has been prepared by Technical Committee ECISS/TC 23 “Steels for heat treatment, alloy steels and free-cutting steels - Qualities and dimensions”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by February 2007, and conflicting national standards shall be withdrawn at the latest by February 2007.

This document supersedes EN 10083-2:1991.

Together with Part 1 and Part 3 of this standard, this Part 2 is a revision of the following European Standards:

EN 10083-1:1991 +A1:1996, *Quenched and tempered steels – Part 1: Technical delivery conditions for special steels*

EN 10083-2: 1991 +A1:1996, *Quenched and tempered steels – Part 2: Technical delivery conditions for unalloyed quality steels*

EN 10083-3:1995, *Quenched and tempered steels – Part 3: Technical delivery conditions for boron steels*

and of

EURONORM 86-70, *Flame and induction hardening steels – Quality 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

EN 10083-2:2006 (E)

1 Scope

This part of EN 10083, in addition to Part 1, specifies the technical delivery requirements for:

- semi-finished products, hot formed, e.g. blooms, billets, slabs (see NOTES 2 and 3 in EN 10083-1:2006, Clause 1),
- bars (see NOTE 2 in EN 10083-1:2006, Clause 1),
- rod,
- wide flats,
- hot-rolled strip and sheet/plate,
- forgings (see NOTE 2 in EN 10083-1:2006, Clause 1),

manufactured from the direct hardening non alloy steels for quenching and tempering and the non alloy flame and induction hardening steels and supplied in one of the heat treatment conditions given for the different types of products in Table 1, lines 2 to 7, and in one of the surface conditions given in Table 2.

The steels are generally intended for the manufacture of quenched and tempered, flame or induction hardened machine parts, but can also be used in the normalized condition.

The requirements for mechanical properties given in this document are restricted to the sizes given in Table 9 and Table 10.

NOTE This document does not apply for bright steel products. For bright steel products EN 10277-1 and EN 10277-5 apply.

In special cases, variations in these technical delivery requirements or additions to them may be agreed at the time of enquiry and order (see Annex A).

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.

EN 10002-1, *Metallic materials – Tensile testing – Part 1: Method of test at ambient temperature*

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

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

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

EN 10045-1, *Metallic materials – Charpy impact test – Part 1: Test method*

EN 10083-1:2006, *Steels for quenching and tempering – Part 1: General technical delivery conditions*

EN 10160, *Ultrasonic testing of steel flat product of thickness equal or greater than 6 mm (reflection method)*

EN 10163-2, *Delivery requirements for surface condition of hot-rolled steel plates, wide flats and sections – Part 2: Plate and wide flats*

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