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Irish Standard  
I.S. EN 10025-2:2004

# Hot rolled products of structural steels - Part 2: Technical delivery conditions for non-alloy structural steels

## I.S. EN 10025-2:2004

*Incorporating amendments/corrigenda issued since publication:*

EN 10025-2:2004/AC:2005

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English version  
Version Française  
Deutsche Fassung

Hot rolled products of structural steels - Part 2: Technical delivery  
conditions for non-alloy structural steels

Produits laminés à chaud en aciers de  
construction - Partie 2: Conditions  
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construction non alliés

Warmgewalzte Erzeugnisse aus  
Baustählen - Teil 2: Technische  
Lieferbedingungen für unlegierte Baustähle

This corrigendum becomes effective on 22 June 2005 for incorporation in the official German version of the EN.

Ce corrigendum prendra effet le 22 juin 2005 pour incorporation dans la version allemande officielle de la EN.

Die Berichtigung tritt am 22.Juni 2005 zur Einarbeitung in die offizielle Deutsche Fassung der EN in Kraft.



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

**Management Centre: rue de Stassart, 36 B-1050 Brussels**

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Ref. No.:EN 10025-2:2004/AC:2005 D

I.S. EN 10025-2:2004

EN 10025-2:2004/AC:2005 (D)

Deutsche Fassung

Ersetze Tabelle 7 (fortgesetzt) durch folgende Tabelle 7 (fortgesetzt):

Tabelle 7 (fortgesetzt)

Bezeichnung		Probenlage <sup>a</sup>	Mindestbruchdehnung <sup>a</sup> %										
			$L_0 = 80 \text{ mm}$ Nenn Dicke mm					$L_0 = 5,65 \sqrt{S_0}$ Nenn Dicke mm					
nach EN 10027-1 und CR 10260	nach EN 10027-2		≤ 1	> 1 ≤ 1,5	> 1,5 ≤ 2	> 2 ≤ 2,5	> 2,5 < 3	≥ 3 ≤ 40	> 40 ≤ 63	> 63 ≤ 100	> 100 ≤ 150	> 150 ≤ 250	> 250 <sup>c</sup> ≤ 400 nur für J2 und K2
S235JR	1.0038	l	17	18	19	20	21	26	25	24	22	21	-
S235J0	1.0114		-										
S235J2	1.0117	t	15	16	17	18	19	24	23	22	22	21	21 (l und t)
S275JR	1.0044	l	15	16	17	18	19	23	22	21	19	18	-
S275J0	1.0143		-										
S275J2	1.0145	t	13	14	15	16	17	21	20	19	19	18	18 (l und t)
S355JR	1.0045	l	14	15	16	17	18	22	21	20	18	17	-
S355J0	1.0553		-										
S355J2	1.0577	t	12	13	14	15	16	20	19	18	18	17	17 (l und t)
S355K2	1.0596		17 (l und t)										
S450J0 <sup>d</sup>	1.0590	l	-	-	-	-	-	17	17	17	17	-	-

<sup>a</sup> Für Blech, Band und Breitflachstahl in Breiten ≥ 600 mm gilt die Richtung quer (t) zur Walzrichtung. Für alle anderen Erzeugnisse gelten die Werte in Walzrichtung (l).  
<sup>c</sup> Die Werte gelten für Flacherzeugnisse.  
<sup>d</sup> Nur für Langerzeugnisse.

## I.S. EN 10025-2:2004

EN 10025-2:2004/AC:2005 (D)

Ersetze Tabelle 8 (fortgesetzt) durch folgende Tabelle 8 (fortgesetzt):

Tabelle 8 (fortgesetzt)

Bezeichnung		Probenlage <sup>a</sup>	Mindestbruchdehnung <sup>a</sup> %									
			$L_0 = 80 \text{ mm}$ Nenn Dicke mm					$L_0 = 5,65 \sqrt{S_0}$ Nenn Dicke mm				
nach EN 10027-1 und CR 10260	nach EN 10027-2		≤ 1	> 1 ≤ 1,5	> 1,5 ≤ 2	> 2 ≤ 2,5	> 2,5 < 3	≥ 3 ≤ 40	> 40 ≤ 63	> 63 ≤ 100	> 100 ≤ 150	> 150 ≤ 250
S185	1.0035	l	10	11	12	13	14	18	17	16	15	15
		t	8	9	10	11	12	16	15	14	13	13
E295 <sup>c</sup>	1.0050 <sup>c</sup>	l	12	13	14	15	16	20	19	18	16	15
		t	10	11	12	13	14	18	17	16	15	14
E335 <sup>c</sup>	1.0060 <sup>c</sup>	l	8	9	10	11	12	16	15	14	12	11
		t	6	7	8	9	10	14	13	12	11	10
E360 <sup>c</sup>	1.0070 <sup>c</sup>	l	4	5	6	7	8	11	10	9	8	7
		t	3	4	5	6	7	10	9	8	7	6

<sup>a</sup> Für Blech, Band und Breitflachstahl in Breiten  $\geq 600$  mm gilt die Richtung quer (t) zur Walzrichtung. Für alle anderen Erzeugnisse gelten die Werte in Walzrichtung (l).

<sup>c</sup> Diese Stähle werden üblicherweise nicht für U-Stahl, Winkel und Profile verwendet.

## I.S. EN 10025-2:2004

## EN 10025-2:2004/AC:2005 (D)

Ersetze Tabelle 12 durch folgende Tabelle 12:

Tabelle 12 — Empfohlene Mindestwerte für die Biegehalbmesser beim Abkanten von Flacherzeugnissen

Bezeichnung		Richtung der Biegekante <sup>a</sup>	Empfohlener kleinster innerer Biegehalbmesser <sup>b</sup> für Nenndicken in mm															
nach EN 10027-1 und CR 10260	nach EN 10027-2		> 1 ≤ 1,5	> 1,5 ≤ 2,5	> 2,5 ≤ 3	> 3 ≤ 4	> 4 ≤ 5	> 5 ≤ 6	> 6 ≤ 7	> 7 ≤ 8	> 8 ≤ 10	> 10 ≤ 12	> 12 ≤ 14	> 14 ≤ 16	> 16 ≤ 18	> 18 ≤ 20	> 20 ≤ 25	> 25 ≤ 30
S235JRC	1.0122	t	1,6	2,5	3	5	6	8	10	12	16	20	25	28	36	40	50	60
S235J0C	1.0115																	
S235J2C	1.0119	l	1,6	2,5	3	6	8	10	12	16	20	25	28	32	40	45	55	70
S275JRC	1.0128	t	2	3	4	5	8	10	12	16	20	25	28	32	40	45	55	70
S275J0C	1.0140																	
S275J2C	1.0142	l	2	3	4	6	10	12	16	20	25	32	36	40	45	50	60	75
S355J0C	1.0554	t	2,5	4	5	6	8	10	12	16	20	25	32	36	45	50	65	80
S355J2C	1.0579																	
S355K2C	1.0594	l	2,5	4	5	8	10	12	16	20	25	32	36	40	50	63	75	90

<sup>a</sup> t: Quer zur Walzrichtung  
l: Parallel zur Walzrichtung

<sup>b</sup> Die Werte gelten für Biegewinkel ≤ 90 °.

Ersetze Tabelle 13 durch folgende Tabelle 13:

**Tabelle 13 — Walzprofilieren von Flacherzeugnissen**

Bezeichnung		Empfohlener kleinster innerer Biegehalbmesser <sup>a</sup> bei Nenndicken ( $t$ ) in mm		
nach EN 10027-1 und CR 10260	nach EN 10027-2	$t \leq 4$	$4 < t \leq 6$	$6 < t \leq 8$
S235JRC	1.0122.	1 $t$	1 $t$	1,5 $t$
S235J0C	1.0115			
S235J2C	1.0119			
S275JRC	1.0128	1 $t$	1 $t$	1,5 $t$
S275J0C	1.0140			
S275J2C	1.0142			
S355J0C	1.0554	1 $t$	1,5 $t$	1,5 $t$
S355J2C	1.0579			
S355K2C	1.0594			

<sup>a</sup> Die Werte gelten für Biegewinkel  $\leq 90^\circ$ .

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English version

## Hot rolled products of structural steels - Part 2: Technical delivery conditions for non-alloy structural steels

Produits laminés à chaud en aciers de construction - Partie 2: Conditions techniques de livraison pour les aciers de construction non alliés

Warmgewalzte Erzeugnisse aus Baustählen - Teil 2: Technische Lieferbedingungen für unlegierte Baustähle

This European Standard was approved by CEN on 1 April 2004.

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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## Contents

Page

Foreword.....	4
1 Scope .....	5
2 Normative references .....	5
2.1 General standards .....	5
2.2 Standards on dimensions and tolerances (see 7.7.1).....	6
2.3 Standards on testing .....	7
3 Terms and definitions .....	7
4 Classification and designation.....	7
4.1 Classification.....	7
4.1.1 Main quality classes .....	7
4.1.2 Grades and qualities .....	8
4.2 Designation .....	8
5 Information to be supplied by the purchaser .....	8
5.1 Mandatory information .....	8
5.2 Options .....	9
6 Manufacturing process .....	9
6.1 Steel making process.....	9
6.2 Deoxidation .....	9
6.3 Delivery conditions.....	9
7 Requirements .....	10
7.1 General.....	10
7.2 Chemical composition .....	10
7.3 Mechanical properties.....	10
7.3.1 General.....	10
7.3.2 Impact properties.....	11
7.3.3 Improved deformation properties perpendicular to the surface .....	11
7.4 Technological properties .....	11
7.4.1 Weldability .....	11
7.4.2 Formability.....	11
7.4.3 Suitability for hot-dip zinc-coating.....	12
7.4.4 Machinability .....	13
7.5 Surface properties .....	13
7.5.1 Strip.....	13
7.5.2 Plates and wide flats .....	13
7.5.3 Sections .....	13
7.5.4 Bars and rods.....	13
7.6 Internal soundness .....	13
7.7 Dimensions, tolerances on dimensions and shape.....	14
8 Inspection .....	14
8.1 General.....	14
8.2 Type of inspection and inspection document .....	14
8.3 Frequency of testing .....	14
8.3.1 Sampling.....	14
8.3.2 Test units .....	14
8.3.3 Verification of chemical composition.....	15
8.4 Tests to be carried out for specific inspection.....	15
9 Preparation of samples and test pieces .....	15

<b>9.1</b>	<b>Selection and preparation of samples for chemical analysis</b> .....	<b>15</b>
<b>9.2</b>	<b>Location and orientation of samples and test pieces for mechanical tests</b> .....	<b>15</b>
<b>9.2.1</b>	<b>General</b> .....	<b>15</b>
<b>9.2.2</b>	<b>Preparation of samples</b> .....	<b>16</b>
<b>9.2.3</b>	<b>Preparation of test pieces</b> .....	<b>16</b>
<b>9.3</b>	<b>Identification of samples and test pieces</b> .....	<b>16</b>
<b>10</b>	<b>Test methods</b> .....	<b>16</b>
<b>10.1</b>	<b>Chemical analysis</b> .....	<b>16</b>
<b>10.2</b>	<b>Mechanical tests</b> .....	<b>16</b>
<b>10.3</b>	<b>Ultrasonic testing</b> .....	<b>16</b>
<b>10.4</b>	<b>Retests</b> .....	<b>16</b>
<b>11</b>	<b>Marking, labelling, packaging</b> .....	<b>16</b>
<b>12</b>	<b>Complaints</b> .....	<b>16</b>
<b>13</b>	<b>Options (see 5.2)</b> .....	<b>17</b>
<b>Annex A (informative) List of corresponding former designations</b> .....		<b>32</b>
<b>Annex B (informative) List of national standards which correspond with EURONORMS referenced</b> .....		<b>33</b>
<b>Bibliography</b> .....		<b>34</b>

## Foreword

This document (EN 10025-2:2004) has been prepared by Technical Committee ECISS/TC 10 "Structural steels - Grades and qualities", the secretariat of which is held by NEN.

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 2005, and conflicting national standards shall be withdrawn at the latest by May 2005.

This document supersedes EN 10025:1990 + A1:1993, *Hot rolled products of non-alloy structural steels - Technical delivery conditions*.

The titles of the other Parts of this European Standard are:

*Part 1: General technical delivery conditions;*

*Part 3: Technical delivery conditions for normalized/normalized rolled weldable fine grain structural steels;*

*Part 4: Technical delivery conditions for thermomechanical rolled weldable fine grain structural steels;*

*Part 5: Technical delivery conditions for structural steels with improved atmospheric corrosion resistance;*

*Part 6: Technical delivery conditions for flat products of high yield strength structural steels in the quenched and tempered condition.*

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of the EU Construction Products Directive (89/106/EEC). For relationship with the EU Construction Products Directive, see informative Annex ZA of EN 10025-1:2004.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

## 1 Scope

Part 2 of this document, in addition to Part 1, specifies the technical delivery conditions for flat and long products and semi-finished products which are meant for further processing to flat and long products of hot rolled non-alloy quality steels in the grades and qualities given in Tables 2 to 6 (chemical composition) and Tables 7 to 9 (mechanical properties) in the delivery conditions as given in 6.3. Three engineering steels are also specified in this document (see Tables 3 and 5) (chemical composition) and Table 8 (mechanical properties). This document does not apply to structural hollow sections and tubes (see EN 10210-1 and EN 10219-1).

The technical delivery conditions apply to thicknesses  $\geq 3$  mm and  $\leq 150$  mm for long products of steel grade S450J0. The technical delivery conditions apply to thicknesses  $\leq 250$  mm for flat and long products of all other grades and qualities. In addition for flat products of qualities J2 and K2 the technical conditions apply to thicknesses  $\leq 400$  mm.

Products made of steel grades S185, E295, E335 and E360 cannot be CE marked.

The steels specified in this Part 2 are not intended to be heat treated except products delivered in delivery condition +N. Stress relief annealing is permitted (see also the NOTE in 7.3.1.1 of EN 10025-1:2004). Products delivered in +N condition can be hot formed and/or normalized after delivery (see Clause 3).

NOTE 1 Semi-finished products which are to be converted to rolled finished products conforming to this document should be the subject of special agreement at the time of the enquiry and order. The chemical composition can also be agreed at the time of the order, however the values should be within the limits of Tables 2 and 3.

NOTE 2 For certain grades and product forms suitability for particular applications may be specified at the time of the enquiry and order (see 7.4.2, 7.4.3 and Table 10).

## 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.

### 2.1 General standards

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

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

EN 10025-1:2004, *Hot rolled products of structural steels - Part 1: General technical delivery conditions.*

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

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

EN 10163-1, *Delivery requirements for surface condition of hot-rolled steel plates, wide flats and sections – Part 1: General requirements.*

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

EN 10163-3, *Delivery requirements for surface condition of hot-rolled steel plates, wide flats and sections – Part 3: Sections.*

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