



BSI Standards Publication

**Aerospace series — Steel —
Sheet and strip, cold rolled —
Thickness $0,1 \text{ mm} \leq a \leq 3 \text{ mm}$
— Dimensions**

National foreword

This British Standard is the UK implementation of EN 2589:2017.

The UK participation in its preparation was entrusted to Technical Committee ACE/61, Metallic materials for aerospace purposes.

A list of organizations represented on this committee can be obtained on request to its secretary.

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EUROPEAN STANDARD

EN 2589

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2017

ICS 49.025.10

English Version

**Aerospace series - Steel - Sheet and strip, cold rolled -
Thickness $0,1 \text{ mm} \leq a \leq 3 \text{ mm}$ - Dimensions**Série aérospatiale - Acier - Tôles et bandes laminées à
froid - Épaisseurs $0,1 \text{ mm} \leq a \leq 3 \text{ mm}$ - DimensionsLuft- und Raumfahrt - Stahl - Bleche und Bänder,
kaltgewalzt - Dicken $0,1 \text{ mm} \leq a \leq 3 \text{ mm}$ - Maße

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European foreword

This document (EN 2589:2017) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

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of an identical text or by endorsement, at the latest by August 2017, and conflicting national standards shall be withdrawn at the latest by August 2017.

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1 Scope

This European Standard specifies the dimensions and tolerances of sheets and strips, cold rolled, in steel, thickness $0,1 \text{ mm} \leq a \leq 3 \text{ mm}$, for aerospace applications.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 2600, *Aerospace series — Designation of metallic semi-finished products — Rules*¹⁾

EN 3848, *Aerospace series — Semi-finished metallic products — Methods of measuring form deviations*

TR 2410, *Metallic materials — Relationship between dimensional standards and metallic material standards*²⁾

3 Required characteristics

3.1 Form

See Figure 1.

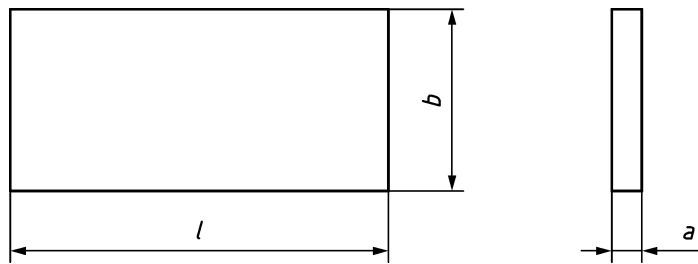


Figure 1

¹⁾ Published as ASD-STAN Prestandard at the date of publication of this European Standard.

²⁾ Published as ASD-STAN Technical Report at the date of publication of this European Standard.

3.2 Dimensions

3.2.1 Thickness and mass

3.2.1.1 Sheet

See Table 1.

Table 1

<i>a</i> Nominal mm	Mass per unit area ^a kg/m ²
0,5	3,9
0,6	4,7
0,8	6,3
1,0	7,9
1,2	9,4
1,4	11,0
1,6	12,6
1,8	14,1
2,0	15,7
2,5	19,6
3,0	23,6

^a For information, calculated with a density: 7,85 kg/dm³.

3.2.1.2 Strip

See Table 2.

Table 2

<i>a</i> Nominal mm	Mass per unit area ^a kg/m ²
0,1	0,8
0,2	1,6
0,3	2,4
0,4	3,1
0,5	3,9
0,6	4,7
0,8	6,3
1,0	7,9
1,2	9,4
1,4	11,0
1,6	12,6
1,8	14,1
2,0	15,7
2,5	19,6

^a For information, calculated with a density: 7,85 kg/dm³.

3.2.2 Width

Width is not specified.

3.2.3 Length

Length is not specified.

3.3 Dimensional tolerances

3.3.1 Thickness

Measurements shall be taken at least 20 mm from the edge. For strip $b \leq 40$ mm, the thickness is measured on the reference line.

3.3.1.1 Sheet

See Table 3.

Table 3

Dimensions in millimetres

Thickness	Tolerances (\pm) for a width:		
	$b \leq 1\ 200$	$1\ 200 < b \leq 1\ 500$	$1\ 500 < b \leq 2\ 000$
$a \leq 0,6$	0,05	-	-
$0,6 < a \leq 0,8$	0,06	-	-
$0,8 < a \leq 1,0$	0,07	-	-
$1,0 < a \leq 1,2$	0,08	0,09	-
$1,2 < a \leq 1,6$	0,08	0,09	0,13
$1,6 < a \leq 2,0$	0,09	0,10	0,14
$2,0 < a \leq 2,5$	0,10	0,11	0,15
$2,5 < a \leq 3,0$	0,11	0,12	0,16

3.3.1.2 Strip

See Table 4

Table 4

Dimensions in millimetres

Thickness	Tolerances (\pm) for <i>a</i> width:		
	$b \leq 125$	$125 < b \leq 250$	$250 < b \leq 600$
$a \leq 0,1$	0,01	-	-
$0,1 < a \leq 0,3$	0,02	-	-
$0,3 < a \leq 0,4$	0,03	0,03	0,03
$0,4 < a \leq 0,5$	0,03	0,03	0,04
$0,5 < a \leq 0,6$	0,03	0,04	0,04
$0,6 < a \leq 0,8$	0,04	0,05	0,05
$0,8 < a \leq 1,0$	0,04	0,05	0,05
$1,0 < a \leq 1,4$	-	0,06	0,07
$1,4 < a \leq 2,0$	-	0,07	0,08
$2,0 < a \leq 2,5$	-	0,08	0,09

3.3.2 Width

3.3.2.1 Sheet

See Table 5.

Table 5

Dimensions in millimetres

Width	Tolerances
$b \leq 2\ 000$	+2 0

3.3.2.2 Strip

See Table 6.

Table 6

Dimensions in millimetres

Width	Tolerances for a thickness			
	$a \leq 0,3$	$0,3 < a \leq 1,0$	$1,0 < a \leq 1,6$	$1,6 < a \leq 2,5$
$b \leq 125$	+0,4 0	+0,4 0	-	-
$125 < b \leq 250$	-	+0,6 0	+0,7 0	+0,8 0
$250 < b \leq 400$	-	+0,8 0	+0,9 0	+1,0 0
$400 < b \leq 600$	-	+1,0 0	+1,2 0	+1,4 0

3.3.3 Length (only for sheet)

See Table 7.

Table 7

Dimensions in millimetres

Length	Tolerances
$l \leq 2\,000$	+5 0
$2\,000 < l \leq 8\,000$	+0,25 % l 0

3.4 Geometric tolerances (only for sheet)

3.4.1 Squareness

3.4.1.1 Method of measurement

See EN 3848.

3.4.1.2 Tolerances

See Table 8.

Table 8

Dimensions in millimetres

Length	Difference of diagonals for all widths and thickness $0,5 \text{ mm} \leq a \leq 3 \text{ mm}$
$1\,200 \leq l \leq 2\,500$	10
$l > 2\,500$	0,4 % l

3.4.2 Lateral curvature

3.4.2.1 Method of measurement

See EN 3848.

3.4.2.2 Tolerances

See Table 9.

Table 9

Dimensions in millimetres

Thickness	Lateral curvature F on	
	length	width
$0,5 \leq a \leq 3$	$\leq 0,2 \% l$	$\leq 0,2 \% b$

3.4.3 Flatness

3.4.3.1 Method of measurement

See EN 3848.

3.4.3.2 Tolerances

See Table 10.

Table 10

Dimensions in millimetres

Thickness	for a chord of:			
	$W^a \leq 1\ 200$	$1\ 200 < W^a \leq 1\ 500$	$W^a \geq 1\ 500$	$W \geq 300$
$a \leq 1,4$	10	15	20	1 % W
$a > 1,4$	8	10	15	0,8 % W

^a $W = l$ or b

If necessary, other values can be defined after agreement between the manufacturer and the purchaser.

3.5 Materials

See TR 2410.

4 Designation

See EN 2600.

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