



SLOVENSKI STANDARD SIST EN 6025:2021

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**Aeronavtika - Plošče - Aluminijeva zlitina 2024 - Odstopanja od tolerance ploskosti
- Debelina - $6 \text{ mm} \leq a \leq 55 \text{ mm}$ - Mere**

Aerospace series - Plates - Aluminium alloy 2024 - Close tolerance flatness - Thickness -
 $6 \text{ mm} \leq a \leq 55 \text{ mm}$ - Dimensions

Luft- und Raumfahrt - Platten - Aluminiumlegierung 2024 - Enge Ebenheitstoleranzen -
Dicken - $6 \text{ mm} \leq a \leq 55 \text{ mm}$ - Maße

Série aérospatiale - Plaques - Alliage d'aluminium 2024 - Tolérances serrées de planéité
- Epaisseurs - $6 \text{ mm} \leq a \leq 55 \text{ mm}$ - Dimensions

<https://standards.iteh.ai/catalog/standards/sist/d3332113-eb3f-45d7-a357-9cc8423d008/sist-en-6025-2021>

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EUROPEAN STANDARD

EN 6025

NORME EUROPÉENNE

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March 2021

ICS 49.025.20

English Version

Aerospace series - Plates - Aluminium alloy 2024 - Close tolerances flatness - Thickness - $6 \text{ mm} \leq a \leq 55 \text{ mm}$ - Dimensions

Série aérospatiale - Plaques - Alliage d'aluminium 2024
- Tolérances serrées de planéité - Epaisseur - $6 \text{ mm} \leq a \leq 55 \text{ mm}$ - Dimensions

Luft- und Raumfahrt - Platten - Aluminiumlegierung
2024 - Enge Ebenheitstoleranzen - Dicken - $6 \text{ mm} \leq a \leq 55 \text{ mm}$ - Maße

This European Standard was approved by CEN on 17 February 2020.

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

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European foreword

This document (EN 6025:2021) 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 document 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 document shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2021, and conflicting national standards shall be withdrawn at the latest by September 2021.

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

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this document: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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EN 6025:2021 (E)

1 Scope

This document specifies the dimensions and tolerances of plates in aluminium alloy 2024 with close-tolerance flatness, thickness $6 \text{ mm} < a \leq 55 \text{ mm}$, for aerospace applications.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 3848, *Aerospace series — Semi-finished metallic products — Methods of measuring form deviations*

EN 6000, *Aerospace series — Aluminium alloy AL-P2024- T351 — Plate — $6 \text{ mm} < a \leq 55 \text{ mm}$ — Close-tolerance flatness*¹⁾

EN 6071, *Aerospace series — Aluminium and aluminium alloy wrought products — Technical specification — Plate*¹⁾

3 Terms and definitions

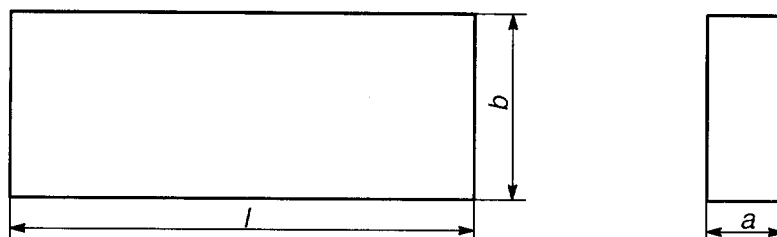
No terms and definitions are provided in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

4 Form

See Figure 1.



Key

| | |
|----------|-----------|
| <i>a</i> | Thickness |
| <i>b</i> | Width |
| <i>l</i> | Length |

Figure 1 — Dimensions of a plate

¹⁾ Published as ASD-STAN Standard at the date of publication of this document by AeroSpace and Defence industries Association of Europe - Standardization (ASD-STAN), <http://www.asd-stan.org/>

5 Recommended dimensions and mass

See Table 1.

Table 1 — Recommended dimensions and mass

| Size code | <i>a</i> Nominal ^a mm | Normal format <i>b</i> × <i>l</i> mm × mm | Mass per unit area ^b kg/m ² |
|-----------|--|---|--|
| 007 | 7 | 1 200 × 2 500 | 19,6 |
| 008 | 8 | | 22,4 |
| 009 | 9 | | 25,2 |
| 010 | 10 | | 28,0 |
| 011 | 11 | | 30,8 |
| 012 | 12 | | 33,6 |
| 014 | 14 | | 39,2 |
| 016 | 16 | | 44,5 |
| 018 | 18 | | 50,4 |
| 020 | 20 | | 56,0 |
| 025 | 25 | | 70,0 |
| 030 | 30 | | 84,0 |
| 032 | 32 | | 89,0 |
| 035 | 35 | | 98,0 |
| 040 | 40 | | 112,0 |
| 045 | 45 | | 126,0 |
| 050 | 50 | 140,0 | |
| 055 | 55 | 154,0 | |

^a Other thickness, width and length on request

^b For information, calculated with a density: 2,8 kg/dm³.

6 Tolerances

6.1 Dimensional tolerances

6.1.1 Thickness

See Table 2.

Table 2 — Tolerances for thickness

Dimensions in millimetres

| Thickness | Tolerances for width | | | |
|------------------|----------------------|--------------------------|--------------------------|--------------------------|
| | $b \leq 1\ 250$ | $1\ 250 < b \leq 1\ 600$ | $1\ 600 < b \leq 2\ 000$ | $2\ 000 < b \leq 2\ 500$ |
| $6 < a \leq 8$ | $\pm 0,30$ | $\pm 0,35$ | $\pm 0,40$ | $\pm 0,40$ |
| $8 < a \leq 10$ | $\pm 0,35$ | $\pm 0,40$ | $\pm 0,40$ | $\pm 0,45$ |
| $10 < a \leq 12$ | $\pm 0,40$ | $\pm 0,45$ | $\pm 0,50$ | $\pm 0,55$ |
| $12 < a \leq 16$ | $\pm 0,50$ | $\pm 0,55$ | $\pm 0,60$ | $\pm 0,65$ |
| $16 < a \leq 20$ | $\pm 0,60$ | $\pm 0,65$ | $\pm 0,70$ | $\pm 0,75$ |
| $20 < a \leq 25$ | $\pm 0,70$ | $\pm 0,75$ | $\pm 0,75$ | $\pm 0,85$ |
| $25 < a \leq 30$ | $\pm 0,75$ | $\pm 1,0$ | $\pm 1,2$ | $\pm 1,2$ |
| $30 < a \leq 35$ | $\pm 0,85$ | $\pm 1,1$ | $\pm 1,3$ | $\pm 1,3$ |
| $35 < a \leq 40$ | $\pm 1,0$ | $\pm 1,1$ | $\pm 1,3$ | $\pm 1,4$ |
| $40 < a \leq 50$ | $\pm 1,2$ | $\pm 1,3$ | $\pm 1,5$ | $\pm 1,7$ |
| $50 < a \leq 55$ | $\pm 1,5$ | $\pm 1,5$ | $\pm 1,7$ | $\pm 1,9$ |

6.1.2 Width

See Table 3.

Table 3 — Tolerance for width

Dimensions in millimetres

| Width | Tolerance |
|-------|-----------|
| All | +10 0 |

6.1.3 Length

See Table 4.

Table 4 — Tolerances for length

Dimensions in millimetres

| Length | Tolerances for all thickness |
|-----------------|------------------------------|
| $l \leq 5\,000$ | +10 0 |
| $l > 5\,000$ | $+0,002 \times l$ 0 |

6.2 Geometric tolerances

6.2.1 Squareness

6.2.1.1 Method of measurement and symbols

It shall be in accordance with EN 3848.

6.2.1.2 Tolerances

See Table 5.

Table 5 — Tolerances for squareness
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Dimensions in millimetres

| Length | Maximum differences in the length of diagonals for all widths and for thickness |
|--------------------------|---|
| | $6 < a \leq 55$ |
| $l \leq 2\,000$ | +8 0 |
| $2\,000 < l \leq 5\,000$ | +10 0 |
| $l > 5\,000$ | $+0,002 \times l$ 0 |

6.2.2 Lateral curvature

6.2.2.1 Method of measurement and symbols

It shall be in accordance with EN 3848.

6.2.2.2 Tolerances

See Table 6.

The lateral curvature may be concave or convex.

Table 6 — Tolerances for lateral curvature

Dimensions in millimetres

| Thickness | Lateral curvature F on | |
|-----------------|--------------------------|-----------------------|
| | width | length |
| $6 < a \leq 55$ | $\leq 0,002 \times b$ | $\leq 0,002 \times l$ |

6.2.3 Flatness

NOTE The values do not apply to materials in conditions O and F .

6.2.3.1 Method of measurement and symbols

It shall be in accordance with EN 3848.

6.2.3.2 Tolerances

See Table 7.

Table 7 — Tolerances for flatness

Dimensions in millimetres

| Thickness | Deviation of flatness f | | | | Chord $W \geq 300$ |
|------------------|---------------------------|------------------|--------------------------|------------------|-----------------------|
| | width | f | length | f | |
| $6 < a \leq 30$ | $b \leq 200$ | 0,6 | $l \leq 1\ 000$ | | 0,003 × W^a |
| | $200 < b \leq 2\ 500$ | $0,003 \times b$ | $1\ 000 < l \leq 1\ 300$ | 2,0 | |
| $l > 1\ 300$ | | | $0,0015 \times l$ | | |
| $30 < a \leq 55$ | $b \leq 200$ | 0,4 | $l \leq 1\ 000$ | $0,002 \times l$ | |
| | $200 < b \leq 2\ 500$ | $0,002 \times b$ | $1\ 000 < l \leq 2\ 000$ | 2,0 | |
| | | | $l > 2\ 000$ | $0,001 \times l$ | |

^a The maximum acceptable deviation for total length and width shall not be exceeded.

7 Material

See Table 8.