BS ISO 6361-3:2014

BSI Standards Publication

Wrought aluminium and aluminium alloys — Sheets, strips and plates

Part 3: Strips: Tolerances on shape and dimensions

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National foreword

This British Standard is the UK implementation of ISO 6361-3:2014.

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

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ISO 6361-3

Third edition
2014-09-15

Wrought aluminium and aluminium alloys — Sheets, strips and plates —

Part 3: Strips: Tolerances on shape and dimensions

Aluminium et alliages d'aluminium corroyés — Tôles, bandes et tôles épaisses —

Partie 3: Bandes: Tolérances sur forme et dimensions

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Contents

Page

Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information.

The committee responsible for this document is ISO/TC 79, *Light metals and their alloys*, Subcommittee SC 6, *Wrought aluminium and aluminium alloys*.

This third edition cancels and replaces the second edition (ISO 6361-3:2011), which has been technically revised.

ISO 6361 consists of the following parts, under the general title *Wrought aluminium and aluminium alloys — Sheets, strips and plates*:

— *Part 1: Technical conditions for inspection and delivery*

— *Part 2: Mechanical properties*

— *Part 3: Strips: Tolerances on shape and dimensions*

— *Part 4: Sheets and plates: Tolerances on shape and dimensions*

— *Part 5: Chemical composition*

Wrought aluminium and aluminium alloys — Sheets, strips and plates —

Part 3: Strips: Tolerances on shape and dimensions

1 Scope

This part of ISO 6361 specifies the tolerances on shape and dimensions for wrought aluminium and aluminium alloy strip by cold-rolling for general engineering applications.

It applies to products with thickness of over 0,15 mm up to, and including 16 mm.

It does not apply to semi-finished rolled products in coiled form to be subjected to further rolling (reroll stock), or to special products such as those that are corrugated or embossed.

Technical conditions for inspection and delivery of products covered by this part of ISO 6361 are specified in ISO 6361-1.

2 Dimensional tolerances

2.1 Thickness

Thickness tolerances shall be in accordance with Tables 1 and 2.

When the tolerance is specified as either all plus, or minus side, the value in Table 1, or in Table 2, shall be doubled.

Tolerances for the products exceeding the range of specified thickness and width shall be agreed upon by the purchaser and the supplier.

Table 1 — Thickness tolerances

Dimensions in millimetres

Specified thickness		Alloy number 1050, 1050A, 1070, 1070A, 1080, 1080A, 1085, 1100, 1200, 1100A, 1230A, 3003, 3103, 3203, 3005, 3105, 4006, 4007, 4015, 5005, 5010, 5110A, 5050, 8011A, 8021, 8079					
		Specified width					
Over	Up to and including	Up to and including 450	Over 450, up to and including 900	Over 900, up to and including 1 400	Over 1 400, up to and including 1 800	Over 1 800, up to and including 2 300	Over 2 300, up to and including 2 600
		Tolerance					
≥ 0,15	0,20	±0,03	±0,03	±0,05			
0,20	0,25	±0,03	±0,04	±0,05			
0,25	0,45	±0,04	±0,04	±0,05	±0,06		
0,45	0,70	±0,04	±0,05	±0,06	±0,08		
0,70	0,90	±0,05	±0,05	±0,06	±0,09	±0,13	

Table 1 *(continued)*

Specified thickness		Alloy number 1050, 1050A, 1070, 1070A, 1080, 1080A, 1085, 1100, 1200, 1100A, 1230A, 3003, 3103, 3203, 3005, 3105, 4006, 4007, 4015, 5005, 5010, 5110A, 5050, 8011A, 8021, 8079					
		Specified width					
Over	Up to and including	Up to and including 450	Over 450, up to and including 900	Over 900, up to and including 1 400	Over 1 400, up to and including 1 800	Over 1 800, up to and including 2 300	Over 2 300, up to and including 2 600
		Tolerance					
0,90	1,1	±0,05	±0,06	±0,08	±0,10	±0,13	
1,1	1,7	±0,06	±0,08	±0,10	±0,13	±0,15	
1,7	1,9	±0,06	±0,08	±0,10	±0,15	±0,20	
1,9	2,4	±0,08	±0,08	±0,10	±0,15	±0,20	
2,4	2,7	±0,09	±0,10	±0,13	±0,18	±0,23	
2,7	3,6	±0,11	±0,11	±0,13	±0,18	±0,23	±0,25
3,6	4,5	±0,15	±0,15	±0,20	±0,23	±0,28	±0,30
4,5	5,0	±0,18	±0,18	±0,23	±0,28	±0,33	±0,38
5,0	6,5	±0,23	±0,23	±0,28	±0,33	±0,38	±0,43
6,5	8,0	±0,33	±0,33	±0,33	±0,38	±0,43	±0,51
8,0	11	±0,48	±0,48	±0,48	±0,48	±0,58	±0,66
11	16	±0,64	±0,64	±0,64	±0,64	±0,76	±0,89

Table 2 — Thickness tolerances

Dimensions in millimetres

Specified thickness		Alloy number 2014, 2014A, 2017, 2017A, 2219, 2024, 2124,2 618A, 3004, 3104, 5021, 5026, 5040, 5042, 5049, 5052, 5059, 5070, 5449, 5251, 5154, 5154A, 5254, 5383, 5454, 5754, 5456, 5082, 5182, 5083, 5086, 6016, 6025, 6061, 6082, 7204, 7010, 7020, 7021, 7022, 7050, 7075, 7475, 7178											
		Specified width											
Over	Up to and including	Up to and including 450	Over 450, up to and including 900	Over 900, up to and including 1 200	Over 1 200, up to and including 1 400	Over 1 400, up to and including 1 500	Over 1 500, up to and including 1 700	Over 1 700, up to and including 1 800	Over 1 800, up to and including 2 000	Over 2 000, up to and including 2 100	Over 2 100, up to and including 2 300	Over 2 300, up to and including 2 400	Over 2 400, up to and including 2 600
		Tolerance											
≥ 0,20	0,25	±0,03	±0,04	±0,06	±0,06								
0,25	0,45	±0,04	±0,04	±0,06	±0,09								
0,45	0,70	±0,04	±0,05	±0,06	±0,09	±0,10	±0,10	±0,10					
0,70	0,90	±0,05	±0,05	±0,06	±0,10	±0,13	±0,13	±0,13	±0,15				
0,90	1,1	±0,05	±0,06	±0,08	±0,10	±0,13	±0,13	±0,13	±0,15				
1,1	1,7	±0,06	±0,08	±0,10	±0,13	±0,15	±0,15	±0,15	±0,18				
1,7	1,9	±0,08	±0,08	±0,10	±0,13	±0,15	±0,15	±0,15	±0,18				
1,9	2,4	±0,09	±0,09	±0,10	±0,13	±0,15	±0,15	±0,15	±0,18	±0,18	±0,30		
2,4	2,7	±0,10	±0,10	±0,13	±0,13	±0,18	±0,18	±0,18	±0,20	±0,20	±0,41		
2,7	3,2	±0,11	±0,11	±0,13	±0,13	±0,18	±0,18	±0,18	±0,20	±0,20	±0,41	±0,46	±0,51

Table 2 *(continued)*

Specified thickness		Alloy number											
		2014, 2014A, 2017, 2017A, 2219, 2024, 2124,2 618A, 3004, 3104, 5021, 5026, 5040, 5042, 5049, 5052, 5059, 5070, 5449, 5251, 5154, 5154A, 5254, 5383, 5454, 5754, 5456, 5082, 5182, 5083, 5086, 6016, 6025, 6061, 6082, 7204, 7010, 7020, 7021, 7022, 7050, 7075, 7475, 7178										
		Specified width											
Over	Up to and including	Up to and including 450	Over 450, up to and including 900	Over 900, up to and including 1 200	Over 1 200, up to and including 1 400	Over 1 400, up to and including 1 500	Over 1 500, up to and including 1 700	Over 1 700, up to and including 1 800	Over 1 800, up to and including 2 000	Over 2 000, up to and including 2 100	Over 2 100, up to and including 2 300	Over 2 300, up to and including 2 400	Over 2 400, up to and including 2 600
		Tolerance											
3,2	3,6	±0,11	±0,11	±0,13	±0,13	±0,18	±0,25	±0,30	±0,33	±0,36	±0,41	±0,46	±0,51
3,6	4,5	±0,15	±0,15	±0,20	±0,20	±0,23	±0,30	±0,36	±0,38	±0,41	±0,43	±0,48	±0,58
4,5	5,0	±0,18	±0,18	±0,25	±0,25	±0,28	±0,36	±0,41	±0,43	±0,43	±0,43	±0,56	±0,66
5,0	6,5	±0,23	±0,23	±0,28	±0,28	±0,33	±0,41	±0,46	±0,46	±0,46	±0,46	±0,61	±0,71
6,5	8,0	±0,33	±0,33	±0,33	±0,33	±0,38	±0,46	±0,51	±0,51	±0,51	±0,51	±0,64	±0,76
8,0	11	±0,48	±0,48	±0,48	±0,48	±0,51	±0,51	±0,58	±0,58	±0,64	±0,64	±0,66	±0,84
11	16	±0,64	±0,64	±0,64	±0,64	±0,64	±0,64	±0,64	±0,76	±0,76	±0,76	±0,89	±0,89

2.2 Width

Width tolerances shall be in accordance with Table 3.

When the tolerance is specified as either all plus, or minus side, the value in Table 3 shall be doubled.

Tolerances for the products exceeding the range of specified thickness and width shall be agreed upon by the purchaser and the supplier.

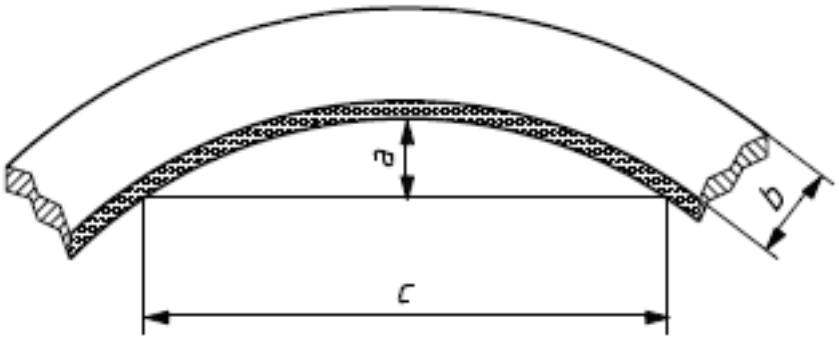
Table 3 — Width tolerance for strip

Dimensions in millimetres

Specified thickness		Specified width					
Over	Up to and including	Up to and including 150	Over 150, up to and including 300	Over 300, up to and including 600	Over 600, up to and including 1 200	Over 1 200, up to and including 1 500	Over 1 500, up to and including 2 600
		Tolerance					
≥ 0,15	3,2	±0,3	±0,4	±0,8	±1,2	±1,6	±3,2
3,2	5,0	±0,3	±0,5	±0,8	±1,6	±2,4	
5,0	6,3	±0,4	±0,8	±1,2	±2,4	±3,2	

3 Shape tolerances

The lateral curvature is the depth of the arc for any 2 000 mm basis lengths (see Figure 1).



Key

a deviation from straightness (maximum value)

b width

c 2 000 mm

Figure 1 — Lateral curvature of strip

When tested with the strip resting on a flat surface, against a straight edge, the lateral curvature shall not exceed the values given in Table 4 for a value of length L = 2 000 mm.

The maximum value for the products exceeding the range of specified thickness and width shall be agreed upon between the purchaser and the supplier.

Table 4 — Lateral curvature tolerances for strip

Dimensions in millimetres

Specified thickness		**Specified width**				
Over	Up to and including	15 or over, up to and including 25	Over 25, up to and including 50	Over 50, up to and including 100	Over 100, up to and including 250	Over 250, up to and including 2 600
		Maximum value (in any 2 000 length)				
≥ 0,15	1,6	19	15	10	7	5
1,6	3,2			10	7	5

Bibliography

[1] ISO 6361-1, *Wrought aluminium and aluminium alloys — Sheets, strips and plates — Part 1: Technical conditions for inspection and delivery*

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