

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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Revised

TOLERANCES Carbon Steel Sheet and Strip

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1. PURPOSE: To publish established manufacturing tolerances.
2. APPLICATION: Tolerances shown herein apply, unless otherwise agreed between purchaser and vendor. These tolerances apply to all conditions, unless otherwise noted.
3. THICKNESS:

TABLE I
COLD FINISHED

Thickness Inch	Tolerance, Inch. Plus and Minus						
	Width Ranges, Inches						
	24 and under	Over 24 to 32 incl.	Over 32 to 40 incl.	Over 40 to 48 incl.	Over 48 to 60 incl.	Over 60 to 70 incl.	Over 70 to 80 incl.
.0112 and under	.0015	.0015	.0015	--	--	--	--
.0113 to .0141, incl.	.002	.002	.002	.002	--	--	--
.0142 to .0194, incl.	.002	.002	.002	.002	.002	--	--
.0195 to .0254, incl.	.003	.003	.003	.003	.003	--	--
.0255 to .0313, incl.	.003	.003	.003	.003	.0035	.004	.004
.0314 to .0388, incl.	.003	.003	.0035	.0035	.0035	.004	.004
.0389 to .0508, incl.	.004	.004	.004	.004	.004	.005	.005
.0509 to .0567, incl.	.005	.005	.005	.005	.005	.006	.006
.0568 to .0709, incl.	.005	.005	.005	.005	.006	.006	.006
.0710 to .0821, incl.	.005	.006	.006	.006	.007	.007	.007
.0822 to .0971, incl.	.006	.006	.007	.007	.008	.009	.009
.0972 to .1419, incl.	.007	.008	.009	.009	.010	.010	.011
.1420 to .1874, incl.	.007	.008	.009	.010	.010	.011	.012
.1875 and over	.007	.008	.009	.010	.011	.012	.013

Thickness is measured at any place on stock less than 1 inch wide; at any place over 3/8 inch from an edge on stock 1 inch or wider.

3. THICKNESS: (cont'd)

TABLE II
HOT FINISHED

Thickness Inch	Tolerance, Inch, Plus and Minus Width Ranges, Inches									
	Over 3-1/2 to 6 incl.	Over 6 to 12 incl.	Over 12 to 15 incl.	Over 15 to 20 incl.	Over 20 to 32 incl.	Over 32 to 40 incl.	Over 40 to 48 incl.	Over 48 to 60 incl.	Over 60 to 70 incl.	Over 70 to incl.
.0141 and under	.002	.002	--	--	--	.002	.002	--	--	--
.0142 to .0194, incl.	.002	.002	.002	.002	.002	.002	.002	--	--	--
.0195 to .0254, incl.	.003	.003	.003	.003	.003	.003	.003	--	--	--
.0255 to .0313, incl.	--	.003	.003	.003	.003	.003	.003	--	--	--
.0314 to .0343, incl.	.004	.004	.004	.004	.004	.004	.004	.004	.005	.005
.0344 to .0388, incl.	--	.004	.004	.004	.004	.004	.004	.004	.005	.005
.0389 to .0508, incl.	--	.005	.005	.005	.005	.005	.005	.005	.006	.006
.0509 to .0567, incl.	--	.005	.005	.006	.006	.006	.006	.006	.007	.007
.0568 to .0709, incl.	--	.005	.006	.006	.006	.006	.006	.006	.007	.007
.0710 to .0821, incl.	--	--	.006	.006	.006	.006	.006	.007	.007	.008
.0822 to .0971, incl.	--	--	.006	.007	.007	.007	.007	.008	.008	.009
.0972 to .1419, incl.	--	--	.007	.008	.008	.008	.008	.010	.010	.011
.1420 to .1874, incl.	--	--	.007	.008	.009	.009	.010	.010	.011	.011
.1875 to .2499, incl.	--	--	.008	.008	.009	.009	.010	.010	--	--

Thickness is measured at any place on stock less than 1 inch wide; at any place over 3/8 inch from an edge on stock 1 inch or wider.

4. WIDTH:TABLE III
COLD FINISHED

Width Inches	Tolerance, Inch, Plus only Thickness Ranges, Inch	
	Over .102 and under	Over .102 to .249 incl.
3-1/2 and under	1/16	1/8
Over 3-1/2 to 12, incl.	3/16	3/16
Over 12 to 32, incl.	3/16	1/4
Over 32 to 48, incl.	1/4	1/4
Over 48 to 60, incl.	1/4	3/8
Over 60	5/16	1/2

TABLE IV
HOT FINISHED

Width Inches	Tolerance, Inch Plus only
2 and under	1/16
Over 2 to 6, incl.	1/8
Over 6 to 15, incl.	3/16
Over 15 to 20, incl.	1/4
Over 20 to 30, incl.	3/8
Over 30 to 50, incl.	1/2
Over 50 to 80, incl.	5/8
Over 80	3/4

5. LENGTH:

TABLE V

Length Inches	Tolerance, Inch Plus only
60 and under	1/2
Over 60 to 96, incl.	3/4
Over 96 to 120, incl.	1
Over 120 to 156, incl.	1-1/4
Over 156 to 192, incl.	1-1/2
Over 192 to 240, incl.	1-3/4

6. CAMBER:

(a) Sheets and Strips wider than 1-1/2 inches.- Shall be of such straightness that the maximum edgewise curvature (depth of arc) shall not exceed 1/4 inch in any 8 feet of length or 1/32 inch x length in feet for other lengths.