

Standard Data

Search

ASTM A554-88a/ASME SA554 WELDED STAINLESS STEEL MECHANICAL TUBING
(ASTM A 554 - 88 a / ASME SA 554 / ASTM A554-88a/ASME-SA554)



1. Scope

1.1 This specification covers welded stainless steel tubing for mechanical applications where appearance, mechanical properties, or corrosion resistance is needed. The grades covered are listed in Table 1.

1.2 This specification covers as-welded or cold-reduced mechanical tubing in sizes to 16 in. (406.4mm) outside diameter, inclusive (for round tubing) and in wall thicknesses 0.020 in. (0.51mm) and over.

1.3 Tubes shall be furnished in one of the following shapes as specified by the purchaser: round, square, rectangular, or special.

1.4 Supplementary requirements of an optional nature are provided and when desired shall be so stated in the order.

1.5 The values stated in inch-pound units are to be regarded as the standard.

Chemical composition

Grade	Mfg. Process	Chemical composition(%)								
		C	Si	Mn	P	S	Ni	Cr	Mo	Others
MT301	E, AT	0.15Max	1.00Max	2.00Max	0.040Max	0.030Max	6.0~8.0	16.0~18.0	-	-
MT302	E, AT	0.15Max	1.00Max	2.00Max	0.040Max	0.030Max	8.0~10.0	17.0~19.0	-	-
MT304	E, AT	0.08Max	1.00Max	2.00Max	0.040Max	0.030Max	8.0~11.0	18.0~20.0	-	-
MT304L	E, AT	0.035Max	1.00Max	2.00Max	0.040Max	0.030Max	8.0~13.0	18.0~20.0	-	-
MT305	E, AT	0.12Max	1.00Max	2.00Max	0.040Max	0.030Max	10.0~13.0	17.0~19.0	-	-
MT309S	E, AT	0.08Max	1.00Max	2.00Max	0.040Max	0.030Max	12.0~15.0	22.0~24.0	-	-
MT309SCb	E, AT	0.08Max	1.00Max	2.00Max	0.040Max	0.030Max	12.0~15.0	22.0~24.0	- Nb+Ta : 10 _i C~1.00	-
MT310S	E, AT	0.08Max	1.00Max	2.00Max	0.040Max	0.030Max	19.0~22.0	24.0~26.0	2.0~3.0	-
MT316	E, AT	0.08Max	1.00Max	2.00Max	0.040Max	0.030Max	11.0~14.0	16.0~18.0	2.0~3.0	-

MT316L	E, AT	0.035Max	1.00Max	2.00Max	0.040Max	0.030Max	10.0~15.0	16.0~18.0	2.0~3.0	-
MT317	E, AT	0.08Max	1.00Max	2.00Max	0.040Max	0.030Max	11.0~14.0	18.0~20.0	-	-
MT321	E, AT	0.08Max	1.00Max	2.00Max	0.040Max	0.030Max	9.0~13.0	17.0~20.0	-	Ti : 5 _i C~0.60
MT330	E, AT	0.15Max	1.00Max	2.00Max	0.040Max	0.030Max	33.0~36.0	14.0~16.0	-	- Nb+Ta : 10 _i C~1.00
MT347	E, AT	0.08Max	1.00Max	2.00Max	0.040Max	0.030Max	9.0~13.0	17.0~20.0	-	-
MT429	E, AT	0.12Max	1.00Max	1.00Max	0.040Max	0.030Max	0.50Max	14.0~13.0	-	-
MT430	E, AT	0.12Max	1.00Max	1.00Max	0.040Max	0.030Max	0.50Max	16.0~18.0	-	Ti : 5 _i C~0.75
MT430Ti	E, AT	0.10Max	1.00Max	1.00Max	0.040Max	0.030Max	0.075Max	16.0~19.5	-	-

Mechanical Properties

Grade	Tensile Test MPa or N/mm ²		Remarks (Similar to JIS)	Possibility Temperature
	Min Yield point	Tensile Strength		
MT301	207	517Min	-	
MT302	207	517Min	-	
MT304	207	517Min	(SUS304TK)	
MT304L	172	483Min	-	
MT305	207	517Min	-	
MT309S	207	517Min	-	
MT309S-Cb	207	517Min	-	
MT310S	207	517Min	-	
MT316	207	517Min	(SUS316TK)	
MT316L	172	483Min	-	
MT317	207	517Min	-	
MT321	207	517Min	(SUS321TK)	
MT330	207	517Min	-	
MT347	207	517Min	(SUS347TK)	
MT429	241	414Min	-	
MT430	241	414Min	(SUS430TK)	
MT430Ti	207	414Min	-	

2. Referenced Documents

2.1 ASTM Standards :

A 370 Test Methods and Definitions for Mechanical Testing of Steel Products²

E 30 Test Methods for Chemical Analysis of Steel, Cast Iron, Open-Hearth Iron, and Wrought Iron^{3s}

E 59 Method of Sampling Steel and Iron for Determination of Chemical Composition³

2.2 Military Standards :

[3. Ordering Information](#)

4. Process

6. Condition

7. Heat Analysis

8. Permissible Variations in Dimensions - Round Tubing

9. Permissible Variations in Dimensions-Square and Rect angular Tubing

10. Workmanship, Finish, and Appearance

11. Surface Finish

12. Rejection

13. Coating

14. Product Marking

15. Packaging