

Table 3.2.4.0(b₂). Design Mechanical and Physical Properties of 2024 Aluminum Alloy Sheet and Plate.

Specification	AMS 4037 ^a											
	Plate											
	T351											
Thickness, in.	0.250-0.499		0.500-1.000		1.001-1.500		1.501-2.000		2.001-3.000		3.001-4.000	
	A	B	A	B	A	B	A	B	A	B	A	B
Mechanical Properties:												
F_{tu} , ksi:												
L	64	66	63	65	62	64	62	64	60	62	57	59
LT	64	66	63	65	62	64	62	64	60 ^d	62 ^d	57 ^d	59 ^d
ST	52 ^b	54 ^b	49 ^b	51 ^b
F_{by} , ksi:												
L	48	50	48	50	47	50	47	49	46	48	43	46
LT	42	44	42	44	42	44	42	44	42	44	41	43
ST	38 ^b	40 ^b	38 ^b	39 ^b
F_{cy} , ksi:												
L	39	41	39	41	39	40	38	40	37	39	35	37
LT	45	47	45	47	44	46	44	46	43	45	41	43
ST	46	48	44	47
F_{su} , ksi (L & LT)	38	39	37	38	37	38	37	38	35	37	34	35
F_{bru} ^c , ksi:												
L & LT (e/D = 1.5)	97	100	95	98	94	97	94	97	91	94	86	89
L & LT (e/D = 2.0)	119	122	117	120	115	119	115	119	111	115	106	109
F_{bry} ^c , ksi:												
L & LT (e/D = 1.5)	72	76	72	76	72	76	72	76	72	76	70	74
L & LT (e/D = 2.0)	86	90	86	90	86	90	86	90	86	90	84	88
e, percent (S-Basis):												
LT	12	...	8	...	7	...	6	...	4	...	4	...
E , 10 ³ ksi							10.7					
E_c , 10 ³ ksi							10.9					
G , 10 ³ ksi							4.0					
μ							0.33					
Physical Properties:												
ω , lb/in ³							0.100					
C, K							See Figure 3.2.4.0(a)					
a							See Figure 3.2.4.0(b)					

Last Revised: Apr 2015, MMPDS-10, Item 14-35. Design allowables were last confirmed in Item 07-41, MMPDS-04CN1.

a Mechanical properties were established under QQ-A-250/4.

b Caution: This specific alloy, temper, and product form exhibits poor stress corrosion cracking resistance in this grain direction. It corresponds to an SCC resistance rating of D, as indicated in Table 3.1.2.3.1(a).

c Bearing values are "dry pin" values per Section 1.4.7.1. See Table 3.1.2.1.1.

d The following rounded T₉₉ and T₉₀ values represent production capacity at the time the table was last confirmed; F_{tu} LT for 2-3 inches T₉₉ = 63 ksi, T₉₀ = 64 ksi; for 3-4 inches T₉₉ = 60 ksi, T₉₀ = 62 ksi.

Table 3.6.2.0(b₁). Design Mechanical and Physical Properties of 6061 Aluminum Alloy Sheet.

Specification	AMS 4026 ^a		AMS 4026 ^a	AMS 4025 ^a , AMS 4026 ^a and AMS 4027 ^a	
				Sheet	
Form	T4		T42 ^b	T6 and T62 ^c	
	0.010-0.249		0.010-0.249	0.010-0.249	
Basis	A	B	S	A	B
Mechanical Properties:					
F_u , ksi:					
L	42	43
LT	30	32	30	42	43
F_y , ksi:					
L	36	38
LT	16	18	14	35	37
F_{ey} , ksi:					
L	35	37
LT	16	18	...	36	38
F_{su} , ksi	20	21	...	27	28
F_{bru} , ksi:					
(e/D = 1.5)	48	51	...	67	69
(e/D = 2.0)	63	67	...	88	90
F_{bry} , ksi:					
(e/D = 1.5)	22	25	...	50	53
(e/D = 2.0)	26	29	...	58	61
e , percent (S-Basis):					
LT	d	...	d	d	...
E , 10 ³ ksi			9.9		
E_c , 10 ³ ksi			10.1		
G , 10 ³ ksi			3.8		
μ			0.33		
Physical Properties:					
ω , lb/in. ³			0.098		
C, K			See Figure 3.6.2.0(a)		
α			See Figure 3.6.2.0(b)		

Last Revised: July 2021, MMPDS-16, Item 20-27.

- a Mechanical properties were established under QQ-A-250/11. AMS 4025 applies to the T62 condition only.
- b Design allowables were based upon data obtained from testing samples of material, supplied in the O or F temper, which were heat treated to demonstrate response to heat treatment by suppliers. Properties obtained by the user may be lower than those listed if the material has been formed or otherwise cold- or hot-worked, particularly in the annealed temper, prior to solution heat treatment.
- c Design allowables were based upon data obtained from testing T6 sheet. Properties obtained from material supplied in the O, T4, or T6 temper, which was heat treated to T62 temper to demonstrate response to heat treatment by suppliers, may be lower than those listed if the material has been formed or otherwise cold-worked, particularly in the annealed temper, prior to solution heat treatment.
- d See Table 3.6.2.0(b₃).