

# TYPICAL PROPERTIES WROUGHT ALUMINUM

ALLOY AND TEMPER	STRENGTH ksi		ELONGATION percent in 2 in.		HARDNESS BRINELL	ULTIMATE SHEARING STRENGTH	FATIGUE ENDURANCE(3) LIMIT	MODULES OF ELASTICITY
	ULTIMATE	YIELD	1/16 in. Thick Specimen	1/2 in. Diameter Specimen	500 kg load 10 mm ball	ksi	ksi	ksi x 10 <sup>3</sup>
1060-0	10	4	43	-	19	7	3	10.0
1060-H 12	12	11	16	-	23	8	4	10.0
1060-H 18	19	18	6	-	35	11	6.5	10.0
1100-0	13	5	35	45	23	9	5	10.0
1100-H 12	16	15	12	25	28	10	6	10.0
1100-H 18	24	22	5	15	44	13	9	10.0
1350-0	12	4	-	-(5)	-	8	-	10.0
1350-H 12	14	12	-	-	-	9	-	10.0
1350-H 19	27	24	-	-(5)	-	15	7	10.0
2011-T3	55	43	-	15	95	32	18	10.2
2011-T8	59	45	-	12	100	35	18	10.2
2014-0	27	14	-	18	45	189	13	10.6
2014-T4, T451	62	42	-	20	105	38	20	10.6
2014-T6, T651	70	60	-	13	135	42	18	10.6
2014-0 Alclad	25	10	21	-	-	18	-	10.5
2014-T3 Alclad	63	40	20	-	-	37	-	10.5
2014-T4, T451 Alclad	61	37	22	-	-	37	-	10.5
2014-T6, T651 Alclad	68	60	10	-	-	41	-	10.5
2017-0	26	10	-	22	45	18	13	10.5
2017-T4, T451	62	40	-	22	105	38	18	10.5
2018-T61	61	46	-	12	120	39	17	10.8
2024-0	27	11	20	22	47	18	13	10.6
2024-T3	70	50	18	-	120	41	-	10.6
20	10.6	-	-	-	-	-	-	-
2024-T4, T351	68	47	20	19	120	41	20	10.6
2024-T361*	72	57	13	-	130	42	18	10.6
2024-0 Alclad	26	11	20	-	-	18	-	10.6
2024-T3 Alclad	65	45	18	-	-	40	-	10.6
2024-T4, T351 Alclad	64	42	19	-	-	40	-	10.6
2024-T81, T851 Alclad	65	60	6	-	-	40	-	10.6
2024-T861 Alclad*	70	66	6	-	-	42	-	10.6
2117-T4	43	24	-	27	70	28	14	10.3
2124-T851	70	64	-	8	-	-	-	10.6
2218-T72	48	37	-	11	95	30	-	10.8
2219-0	25	11	18	-	-	-	-	10.6
2219-T42	52	27	20	-	-	-	-	10.6
2219-T31, T351	52	36	17	-	-	-	-	10.6
2219-T37	57	46	11	-	-	-	-	10.6
2219-T62	60	42	10	-	-	-	15	10.6
2219-T81, T851	65	49	10	-	-	-	15	10.6
2219-T87	69	57	10	-	-	-	15	10.6
2618-T61	64	54	-	10	115	38	18	10.8
3003-0	16	6	30	40	28	11	7	10.0
3003-H12	19	18	10	20	35	12	8	10.0
3003-H16	26	25	5	14	47	15	10	10.0
3003-H18	29	27	4	10	55	16	10	10.0
3003-0 Alclad	16	6	30	40	-	11	-	10.0
3003-H12 Alclad	19	18	10	20	-	12	-	10.0
3003-H14 Alclad	22	21	8	16	-	14	-	10.0
3003-H16 Alclad	26	25	5	14	-	15	-	10.0
3003-H18 Alclad	29	27	4	10	-	16	-	10.0
3004-0	26	10	20	25	45	16	14	10.0
3004-H32	31	25	10	17	52	17	15	10.0
3004-H36	38	33	5	9	70	20	16	10.0
3004-H38	41	36	5	6	77	21	16	10.0
3105-0	17	8	24	-	-	12	-	10.0
3105-H12	22	19	7	-	-	14	-	10.0
3105-H16	28	25	4	-	-	16	-	10.0
3105-H22	24	20	11	-	-	14	-	10.0
3105-H25	26	23	8	-	-	15	-	10.0
3105-H28	26	26	8	-	-	17	-	10.0
5005-0	18	6	25	-	28	11	-	10.0
5005-H12	20	16	10	-	-	14	-	10.0
5005-H16	26	25	5	-	-	15	-	10.0
5005-H32	20	17	11	-	36	14	-	10.0
5005-H36	26	24	6	-	46	15	-	10.0
5005-H38	29	27	5	-	51	16	-	10.0

ALLOY AND TEMPER	STRENGTH ksi		ELONGATION percent in 2 in.		HARDNESS BRINELL	ULTIMATE SHEARING STRENGTH	FATIGUE ENDURANCE(3) LIMIT	MODULES OF ELASTICITY
	ULTIMATE	YIELD	1/16 in. Thick Specimen	1/2 in. Diameter Specimen	500 kg load 10 mm ball	ksi	ksi	ksi x 10 <sup>3</sup>
5050-0	21	8	24	-	36	15	12	10.0
5050-H32	25	21	9	-	46	17	13	10.0
5050-H36	30	26	7	-	58	19	14	10.0
5050-H38	32	29	6	-	63	20	14	10.0
5052-0	28	13	25	30	47	18	16	10.2
5052-H32	33	28	12	18	60	20	17	10.2
5052-H34	38	31	10	14	68	21	18	10.2
5052-H36	40	35	8	10	73	23	19	10.2
5083-0	42	21	-	22	-	25	-	10.3
5083-H321, H116	46	33	-	16	-	-	23	10.3
5086-0	38	17	22	-	-	23	-	10.3
5086-H32, H116	42	30	12	-	-	-	-	10.3
5086-H34	47	37	10	-	-	27	-	10.3
5086-H112	39	19	14	-	-	-	-	10.3
5154-0	35	17	27	-	58	22	17	10.2
5154-H32	39	30	15	-	67	22	18	10.2
5154-H34	42	33	13	-	73	24	19	10.2
5154-H38	48	39	10	-	80	28	21	10.2
5252-H25	34	25	11	-	68	21	-	10.0
5252-H38, H28	41	35	5	-	75	23	-	10.0
5254-0	35	17	27	-	58	22	17	10.2
5254-H32	39	30	15	-	67	22	18	10.2
5254-H36	45	36	12	-	78	26	20	10.2
5254-H38	48	39	10	-	80	28	21	10.2
5254-H112	35	17	25	-	63	-	17	10.2
5454-0	36	17	22	-	62	23	-	10.2
5454-H32	40	30	10	-	73	24	-	10.2
5454-H34	44	35	10	-	81	26	-	10.2
5454-H111	38	26	14	-	70	23	-	10.2
5454-H112	36	18	18	-	62	23	-	10.2
5456-0	45	23	-	24	-	-	-	10.3
5456-H25	45	24	-	22	-	-	-	10.3
5456-H321, H116	51	37	-	16	90	30	-	10.3
5457-0	19	7	22	-	32	12	-	10.0
5457-H25	26	23	12	-	48	16	-	10.0
5457-H38, H28	30	27	6	-	55	18	-	10.0
5652-0	28	13	25	30	47	18	16	10.2
5652-H32	33	28	12	18	60	20	17	10.2
5652-H36	40	35	8	20	73	23	19	10.2
5652-H38	42	37	7	8	77	24	20	10.2
5657-H25	23	20	12	-	40	14	-	10.0
5657-H38, H28	28	24	7	-	50	15	-	10.0
6061-0	18	8	25	30	30	12	9	10.0
6061-T4, T451	35	21	22	25	65	24	14	10.0
6061-T6, T651	45	40	12	17	95	30	14	10.0
6061-0 Alclad	17	7	25	-	-	11	-	10.0
6061-T4, T451 Alclad	33	19	22	-	-	22	-	10.0
6061-T6, T651 Alclad	47	44	12	-	-	27	-	10.0
6063-0	13	7	-	-	25	10	8	10.0
6063-T1	22	13	20	-	42	14	9	10.0
6063-T5	27	21	12	-	60	17	10	10.0
6063-T6	35	31	12	-	73	22	10	10.0
6063-T83	37	35	9	-	82	22	-	10.0
6063-T831	30	27	10	-	70	18	-	10.0
6066-0	22	12	-	18	43	14	-	10.0
6066-T4, T451	52	30	-	18	90	29	-	10.0
6066-T6, T651	57	52	-	12	120	34	16	10.0
6070-T6	55	51	10	-	-	34	14	10.0
6082-T651	47	44	12	-	-	-	-	10.0
6101-H111	14	11	-	-	-	-	-	10.0
6101-T6	32	28	15	-	71	20	-	10.0
6262-T9	58	55	-	10	120	35	13	10.0
6351-T4	36	22	20	-	-	-	-	10.0
6351-T6	45	41	14	-	95	29	13	10.0
6463-T1	22	13	20	-	42	14	10	10.0
6463-T6	35	31	12	-	74	22	10	10.0

ALLOY AND TEMPER	STRENGTH ksi		ELONGATION percent in 2 in.		HARDNESS BRINELL	ULTIMATE SHEARING STRENGTH	FATIGUE ENDUR ANCE(3) LIMIT	MODULES OF ELASTICITY
	ULTIMATE	YIELD	1/16 in. Thick Specimen	1/2 in. Diameter Specimen	500 kg load 10 mm ball	ksi	ksi	ksi x 10 <sup>3</sup>
7049-T73	75	65	-	12	135	44	-	10.4
7049-T7352	75	63	-	11	135	43	-	10.4
7050-T73510, T73511	72	63	-	12	-	-	-	10.4
7050-T7451*	76	67	-	11	-	44	-	10.4
7050-T7651	79	70	-	11	-	47	-	10.4
7075-0	33	15	17	16	60	22	-	10.4
7075-T6, T651	83	73	11	11	150	48	23	10.4
7075-0 Alclad	32	14	17	-	-	22	-	10.4
7075-T6, T651 Alclad	79	69	11	-	-	46	-	10.4
7175-T74	76	66	-	11	135	42	23	10.4
7178-0	33	15	15	16	-	-	-	10.4
7178-T6, T651	88	78	10	11	-	-	-	10.4
7178-T76, T7651	83	73	-	11	-	-	-	10.3
7178-0 Alclad	32	14	16	-	-	-	-	10.4
7178-T6, T651 Alclad	81	71	10	-	-	-	-	10.4
7475-T61	82	71	11	-	-	-	-	10.2
7475-T651	85	74	-	13	-	-	-	10.4
7475-T7351	72	61	-	13	-	-	-	10.4
7475-T761	75	65	12	-	-	-	-	10.2
7475-T61 Alclad	75	66	11	-	-	-	-	10.2
7475-T761 Alclad	71	61	12	-	-	-	-	10.2

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