"Protecting your Productivity"

Properties of Aluminum

(Tabulated in accordance with the Unified Numbering System for Metals and Alloys (UNS), Society of Automotive Engineers, Warrendale, Pa., 1975. This reference contains the cross reference numbers for AISI, ASTM, FED, MIL SPEC, and SAE specifications. These are typical properties for sizes of about 1/2 inch. A typical value may be neither the mean nor the minimum. It is a value which can be obtained when the purchase specifications are carefully written and with continuous inspection and testing. The values given for fatigue strength, S_f, correspond to 50e7 cycles of completely reversed stress. Aluminum alloys do not have an endurance limit. The yield strength is 0.2% offset value. Multiply strength in kpsi by 6.89 to get strength in MPa.)

UNS Alloy Number	Temper	Yield Strength kpsi	Tensile Strength kpsi	Shear modulus of Rupture kpsi	Fatigue Strength kpsi	Elongation In 2 in %	Brinell Hardness H_b
A91100	O	5	13	9.5	5	45	23
A91100	H12	14	15.5	10	6	25	28
A91100	H14	20	22	14	9	16	40
A91100	H16	24	26	15	9.5	14	47
A91100	H18	27	29	16	10	10	55
A93003	O	6	16	11	7	40	28
A93003	H12	17	19	12	8	20	35
A93003	H14	20	22	14	9	16	40
A93003	H16	24	26	15	9.5	14	47
A93003	H18	27	29	16	10	10	55
A93004	O	10	26	16	14	25	45
A93004	H32	22	31	17	14.5	17	52
A93004	H34	27	34	18	15	12	63
A93004	H36	31	37	20	15.5	9	70
A93004	H38	34	40	21	16	6	77
A92011	T3	48	55	32	18	15	95
A92011	T8	45	59	35	18	12	100
A92014	O	14	27	18	13	18	45
A92014	T4	40	62	38	20	20	105
A92014	T6	60	70	42	18	13	135
A92017	O	10	26	18	13	22	45
A92017	T4	40	62	38	18	22	105
A92018	T61	46	61	39	17	12	120
A92024	O	11	27	18	13	22	47
A92024	T3	50	70	41	20	16	120
A92024	T4	48	68	41	20	19	120
A92024	T36	57	73	42	18	13	130

Halsey Manufacturing, Inc.
209 N. Mayhill Road, Denton, Texas 76208
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A95052	O	13	28	18	17	30	45
A95052	H32	27	34	20	17.5	18	62
A95052	H34	31	37	21	18	14	67
A95052	H36	34	39	23	18.5	10	74
A95052	H38	36	41	24	19	8	85
A95056	O	22	42	26	20	35	
A95056	H18	59	63	34	22	10	
A95056	H38	50	60	32	22	15	
A96061	O	8	18	12.5	9	30	30
A96061	T4	21	35	24	13.5	25	65
A96061	T6	40	45	30	13.5	17	95
A97075	T6	72	82	49	24	11	150

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