

## Alloy 6061

## Chemical Composition Limits

## ELEMENT

WEIGHT %	Cu	Mg	Mn	Si	Fe	Zn	Ti	Cr	Each	Total
MINIMUM	0.15	0.80	–	0.40	–	–	–	0.04	–	–
MAXIMUM	0.40	1.20	0.15	0.80	0.70	0.25	0.15	0.35	0.05	0.15

## Typical Physical Properties

	AVERAGE COEFFICIENT OF THERMAL EXPANSION	MELTING RANGE APPROX.	TEMPER	THERMAL CONDUCTIVITY AT 77°F	ELECTRICAL CONDUCTIVITY AT 68°F		ELECTRICAL RESISTIVITY AT 68°F
	(68-212°F PER F)	°F		ENGLISH UNITS	EQUAL VOLUME	EQUAL WEIGHT	OHM-CIR. MIL/FOOT
ALLOY 6061	13.1	1080-1205	O	1250	47	155	22
	–	–	T4	1070	40	132	26
	–	–	T6	1160	43	142	24

## Typical US Mechanical Properties

ALLOY AND TEMPER	TENSION				HARDNESS	SHEAR	FATIGUE	MODULUS
	STRENGTH KSI		ELONGATION PERCENT IN 2 IN.		BRINNELL NUMBER	ULTIMATE SHEARING STRENGTH	ENDURANCE LIMIT	MODULUS 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>
6061-T4, T451	35	21	22	25	65	24	14	10.0
6061-T6, T651	45	40	12	17	95	30	14	10.0

The following typical properties are not guaranteed, since in most cases they are averages for various sizes, product forms and methods of manufacture and may not be exactly representative of any particular product or size. These data are intended only as a basis for comparing alloys and tempers and should not be specified as engineering requirements or used for design purposes.