

Alloy 6063

Chemical Composition Limits

ELEMENT

WEIGHT %	Cu	Mg	Mn	Si	Fe	Zn	Ti	Cr	Each	Total
MINIMUM	0.15	0.45	-	0.20	-	-	-	-	-	-
MAXIMUM	0.10	0.90	0.10	0.60	0.35	0.10	0.15	0.10	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 6063	13.1	1080-1205	0	1510	58	191	18
	-	-	T1	1340	50	165	21
	-	-	T5	1450	55	181	19
	-	-	T6, T83	1390	53	175	20

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 ³
6063 T5	27	21	12	25	60	17	10	10.0
6063 T6	35	31	12	17	73	22	10	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.

