

Alloy 2219

Chemical Composition Limits

ELEMENT

WEIGHT %	Cu	Mg	Mn	Si	Fe	Zn	Ti	Each	Total
MINIMUM	5.80	-	0.20	-	-	-	0.02	-	-
MAXIMUM	6.80	0.02	0.40	0.20	0.30	0.10	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 2219	12.4	1010-1190	O	1190	44	138	24
	-	-	T31, T37	780	28	88	37
	-	-	T6, T81, T87	840	30	94	35

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 ⁶
2219-O	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	66	51	10	-	-	-	15	10.6
2219-T87	69	57	10	-	-	-	15	10.6

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.