

# 2024

## DESCRIPTION

Aluminum alloy 2024 is a high-strength, heat-treatable alloy primarily composed of aluminum and copper, with trace amounts of other elements such as manganese, silicon, and magnesium.

## APPLICATIONS

Aluminum alloy 2024 is widely used in various applications, particularly in the aerospace industry, due to its high strength-to-weight ratio and excellent fatigue resistance.

### TYPICAL PHYSICAL PROPERTIES

Density	g/cm <sup>3</sup>	2.77
	lbs/in <sup>3</sup>	0.10007
Melting Point	°F	950
	°C	510
Specific Heat	J/g-°C	0.875
	BTU/lb-°F	0.209
Thermal Conductivity	W/m-K	121
	BTU-in/hr-ft <sup>2</sup> -°F	840

### TYPICAL MECHANICAL PROPERTIES

Tensile Strength	MPa	469
	psi	68000
Yield Strength	MPa	324
	psi	47000
Elongation		20%
Hardness	Brinell	120
	Knoop	150
	Rockwell A	46.8
	Rockwell B	75
Modulus of Elasticity	Vickers	137
	MPa	73.1
Poisson's Ratio	GPa	73.1
	ksi	10600
Fatigue Strength		0.33
	MPa	138
	ksi	20000

### Chemical Composition (% by weight)

Elements	Min	Max
Si	-	0.50
Fe	-	0.50
Cu	3.80	4.90
Mn	0.30	0.90
Mg	1.20	1.80
Cr	-	0.10
Zn	-	0.25
Ti	-	0.15
Al	Balance	

## Special Purpose Alloys & Metals From Stock

### Controlled Expansion | Glass Sealing

#### Kovar ASTM F 15 Alloy

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### Alloy 32/42/48/49

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### VIM VAR CORE IRON

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### SUPRA 510 (Ni50FeCr10)

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

### TITANIUM ALLOYS

#### TITANIUM TI-6AL-4V GRADE 5

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### TITANIUM GRADE 2

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### TITANIUM 6-2-4-6

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### TITANIUM BT20

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

### PH ALLOYS

#### 17-7PH

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### 15-5PH

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### 17-4PH

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

### ALUMINIUM HARD ALLOYS

#### 7475 AA7475/7449 AA7449

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### 7075 UNS A97075

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### 7050 AMS 4050

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### 7175 UNS A97075

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### 2014 AMS 4121

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### 2024 UNS A92024

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### 2618 UNS A92618

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### 2017 AMS 4037

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### 2011 UNS A92011

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

### NICKEL BASED ALLOYS

#### WASPALLOY

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### INCONEL X750

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### INCONEL 945

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### INCONEL 945X

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### NIMONIC C263

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### NIMONIC 75

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### INCONEL 909

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### INCONEL 718

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### INCONEL 660

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

### HIGH TEMP ALLOYS

#### HAYNES 188

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### L605

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### MP35N

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### MP159

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### RENE41

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### HAYNES 230

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### ELGILOY

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

#### HAYNES 242

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

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