

# 7075

## DESCRIPTION

7075 Aluminum Alloy is a high-strength, heat-treatable alloy known for its exceptional strength and lightweight properties. It offers an excellent strength-to-weight ratio, making it a top choice for applications that demand both durability and reduced weight, such as in aerospace and automotive industries.

### TYPICAL PHYSICAL PROPERTIES

Density	lbs./ in <sup>3</sup>	0.101
	Mg/m <sup>3</sup>	2.80
Melting Range	°F	990-1175
	°C	532-635
Specific Heat	BTU/lb - °F	0.23
	J/kg-°K	960
Modulus of Elasticity	GPa	72
Thermal Conductivity	W/m.K	134-160
Electrical Resistivity	IACS	40%

### Chemical Composition (% by weight)

Elements	Min	Max
Si	-	0.40
Fe	-	0.50
Cu	1.20	2.00
Mn	-	0.30
Cr	0.18	0.28
Mg	2.10	2.90
Zn	5.10	6.10
Ti	-	0.20
Al	Balance	

## APPLICATIONS

Used in high-performance vehicles for components such as chassis, frames, and suspension systems, where lightweight yet strong materials are crucial.

### TYPICAL MECHANICAL PROPERTIES

Tensile Strength	ksi	40-78
	MPa	275 - 540
Yield Strength	ksi	24-68
	MPa	455 - 465
Elongation at Break		11%
Hardness	Brinell	150
	Rockwell A	53.5
	Rockwell B	87
	Vickers	175

## Specifications

- AMS 4044 7075 -0 Sheet and Plate
- AMS 4045 7075-T6 Sheet and T651 Plate
- AMS 4046 7075-T6 Alclad one side Sheet, T651 Plate
- AMS 4048 7075-T0 Alclad Sheet and Plate
- AMS 4049 7075 -T6 Alclad Sheet and T651 Plate
- AMS 4078 7075-T7351 Plate
- AMS 4122 7075-T6 Cold finished rod, bar, wire
- AMS 4123 7075-T651 Cold finished bar, rod
- AMS 4124 7075-T7351 Cold finished bar, rod, wire
- AMS 4126 7075-T6 Forgings

## 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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