

# Aluminum 7075 Specification Sheet

Aluminum Alloy 7075 is a high-strength, heat-treatable aluminum alloy known for its exceptional mechanical properties, making it one of the strongest aluminum alloys commercially available. It is widely used in aerospace, defense, motorsports, and structural engineering applications.

7075 is an aluminum alloy with zinc as the primary alloying element. Its alloy's composition roughly includes 5.6 - 6.1% zinc, 2.1 - 2.5% magnesium, 1.2 - 1.6% copper, and less than a half percent of silicon, iron, manganese, titanium, chromium, and other metals. It has excellent mechanical properties, and exhibits good ductility, high strength, toughness and good resistance to fatigue. It is more susceptible to embrittlement than many other aluminum alloys because of micro segregation, but has significantly better corrosion resistance than the 2000 alloys. It is one of the most commonly used aluminum alloy for highly stressed structural applications, and has been extensively utilized in aircraft structural part

## General Overview

Property	Specification
Alloy Designation	7075
Temper Options	T6, T651, T73, T7351, O, W
Standard	ASTM B209, ASTM B221, ASTM B241, AMS 4045, EN 573-3
Material Form	Plate, Sheet, Bar, Rod, Forgings, Tube, Extrusion

### Chemical composition\* (EN 573-3):

Specifications in %												Remainder: Aluminium		Other	
Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Ga	V	Note	Individual	Total <sup>2</sup>		
0,40	0,50	1,2 - 2,0	0,30	2,1 - 2,9	0,18 - 0,28	-	5,1 - 6,1	0,20	-	-	<sup>3</sup>	0,05	0,15		

<sup>x</sup> Chemical specifications as perc. of weight. If no ranges are specified, the alloy content has the maximum value.

<sup>2</sup> Includes all items listed for which no limit values are specified.

<sup>3</sup> Sum for Zr+Ti max. 0,25. This applies to forged or extruded products when the value has been agreed upon between the customer and supplier.

## Aluminum 7075 Round Bar

### EN AW-7075 Al Zn5,5 Mg Cu

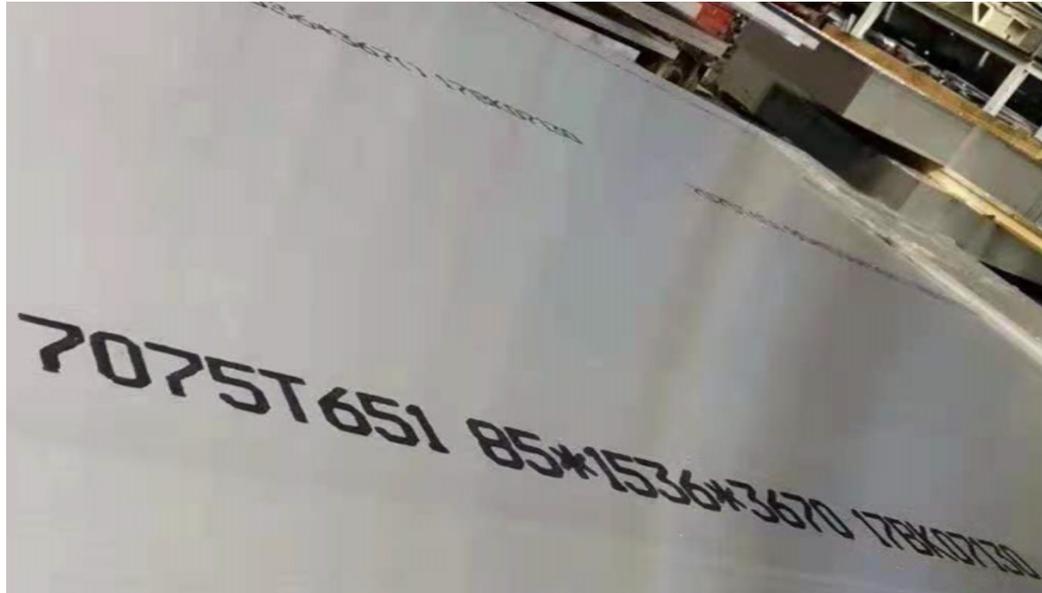
#### EN 754-2 Mechanical properties: round bars – drawn

Delivery condition <sup>5</sup>	Dia. mm.	Tensile strength $R_m$ MPa		Elastic limit $R_{p0.2}$ MPa		Elongation % min.		Hardness <sup>9</sup> HBW
		min.	max.	min.	max.	A50 mm	A	
T6	≤ 80	540	-	485	-	6	7	150
T651	≤ 80	540	-	485	-	4	5	150
T73	≤ 80	455	-	385	-	8	10	135
T7351	≤ 80	455	-	385	-	6	8	135
<sup>5</sup>	Other possible delivery conditions for this alloy: O, H111							
<sup>9</sup>	For information only							

#### EN 755-2 Mechanical properties: round bars – pressed

Delivery condition <sup>5</sup>	Dia. mm.	Tensile strength $R_m$ MPa		Elastic limit $R_{p0.2}$ MPa		Elongation % min.		Hardness <sup>9</sup> HBW
		min.	max.	min.	max.	A50 mm	A	
T6 T6510 T6511	≤ 25	540	-	480	-	5	7	150
	> 25 to ≤ 100	560	-	500	-	-	7	150
	> 100 to ≤ 150	550	-	440	-	-	5	150
	> 150 to ≤ 200	440	-	400	-	-	5	150
T73 T73510 T73511	≤ 25	485	-	420	-	5	7	135
	> 25 to ≤ 75	475	-	405	-	-	7	135
	> 75 to ≤ 100	470	-	390	-	-	6	135
	> 100 to ≤ 150	440	-	360	-	-	6	135
<sup>5</sup>	Other possible delivery conditions for this alloy: O, H111							
<sup>9</sup>	For information only							

## Aluminum 7075 Plate



# EN AW-7075 Al Zn5,5 Mg Cu

## EN 485-2 Mechanical properties:

Delivery condition <sup>5</sup>	Nominal thickness mm		Tensile strength $R_m$ MPa		Elastic limit $R_{p0,2}$ MPa		Elongation % min.		Bending radius <sup>9</sup>		Hardness <sup>9</sup> HBW	
	over	to	min.	max.	min.	max.	A50 mm	A	180°	90°		
T6 T62 T651	≥ 0,4	0,8	525	-	460	-	6	-	-	-	4,5 t <sup>8</sup>	157
	0,8	1,5	540	-	460	-	6	-	-	-	5,5 t <sup>8</sup>	160
	1,5	3,0	540	-	470	-	7	-	-	-	6,5 t <sup>8</sup>	161
	3,0	6,0	545	-	475	-	8	-	-	-	8,0 t <sup>8</sup>	163
	6,0	12,5	540	-	460	-	8	-	-	-	12,0 t <sup>8</sup>	160
	12,5	25,0	540	-	470	-	-	6	-	-	-	161
	25,0	50,0	530	-	460	-	-	5	-	-	-	158
	50,0	60,0	525	-	440	-	-	4	-	-	-	155
	60,0	80,0	495	-	420	-	-	4	-	-	-	147
	80,0	90,0	490	-	390	-	-	4	-	-	-	144
	90,0	100,0	460	-	360	-	-	3	-	-	-	135
	100,0	120,0	410	-	300	-	-	2	-	-	-	119
	120,0	150,0	360	-	260	-	-	2	-	-	-	104
T652	150,0	200,0	360	-	260	-	-	1	-	-	-	-
	200,0	300,0	360	-	260	-	-	1	-	-	-	-
<sup>5</sup>	Other possible delivery conditions for this alloy: O · T73 · T7351 · T76 · T7651											
<sup>8</sup>	Considerably lower bending radii can be obtained immediately after solution annealing.											
<sup>9</sup>	For information only											

Aluminum 7075 Tube/Pipe

# EN AW-7075 Al Zn5,5 Mg Cu

## EN 754-2 Mechanical properties: tubes – drawn

Delivery condition	Wall thickness mm	Tensile strength $R_m$ MPa		Elastic limit $R_{p0,2}$ MPa		Elongation % min.		Hardness <sup>9</sup> HBW
		min.	max.	min.	max.	A50 mm	A	
T6	≤ 20	540	-	485	-	6	7	150
T6510 / T6511	≤ 20	540	-	485	-	4	5	150
T73	≤ 20	455	-	385	-	8	10	135
T73510 / T73511	≤ 20	455	-	385	-	6	8	135
<sup>9</sup>	For information only							

## EN 755-2 Mechanical properties: tubes – pressed

Delivery condition <sup>5</sup>	Wall thickness mm	Tensile strength $R_m$ MPa		Elastic limit $R_{p0,2}$ MPa		Elongation % min.		Hardness <sup>9</sup> HBW
		min.	max.	min.	max.	A50 mm	A	
T6 T6510 T6511	≤ 5	540	-	485	-	6	8	150
	> 5 to ≤ 10	560	-	505	-	5	7	150
	> 10 to ≤ 50	560	-	495	-	4	6	150
T73 T73510 T73511	≤ 5	470	-	400	-	5	7	135
	> 5 to ≤ 25	485	-	420	-	6	8	135
	> 25 to ≤ 50	475	-	405	-	-	8	135
<sup>5</sup>	Other possible delivery conditions for this alloy: O, H111							
<sup>9</sup>	For information only							