

1100 O H14 H18 H112 Aerospace Aluminum Tube Pipe

High-purity aluminum alloy tube, 1100 aluminum tube satisfies AMS-4003, AMS-QQ-A-200/1, and more criteria. It is frequently utilized for structural elements, fuselage, cabin walls, aircraft hydraulic pipes, fuel tanks, fuel transmission pipelines, and other parts due to its exceptional processing performance, corrosion resistance, weldability, and low density.

1 . Why select GNEE Aluminum's 1100 O H14 H18 H112 aerospace aluminum tube pipe?

Quality could fully meet worldwide aviation standard

The specification's WW-T-700/1 1110-H14 seamless drawn aluminum tube is primarily utilized as a lightweight, high-strength structural material in the military, aerospace, and other industries.

Low-pressure gas pipes, fuel oil pipelines, instrument pipelines, hydraulic pipelines, airplane constructions, and other applications are the primary uses for the 1100-H14 aluminum pipe that is specified in the AMS 4062 specification.

The American Society for Testing and Materials created ASTM B210/B210M-19a, a standard that specifies seamless aluminum alloy tubing, including 1100 aluminum alloy tubing.

EN 573-3:2013: The European Organization for Standardization published this standard, which details the form and chemical makeup of aluminum and aluminum alloys, as well as the specifications for the chemical makeup of 1100 aluminum alloys.

The Japanese Industrial Standard, or JIS H 4000:2006, details the dimensional tolerances, physical characteristics, and chemical makeup of aluminum and aluminum alloys, including 1100 aluminum alloys.

A Chinese national standard known as GB/T 3191-2018 details the dimensional

tolerances, physical characteristics, and chemical makeup of aluminum and its alloys, including 1100 aluminum alloys.

Production and management comply with international aviation quality system certification

AS9100

OHSAS 18001

ISO14001

ISO 9001

NADCAP HT

NADCAP NDT

IATF16949

2 . Specs of 1100 O H14 H18 H112 aerospace aluminum tube pipe

1100 aluminum tube pipe specs	
Alloy	1100
Temper	O, H14, H18, H112
Outer diameter	4.0 mm-130 mm
Wall thickness	0.4-10 mm
Length	3000 mm, 4000mm, or in coil type
Standard	WW-T-700/1 1100-H14 Seamless drawn aluminum tube AMS 4062 ASTM B210/B210M-19a EN 573-3:2013 JIS H 4000:2006 GB/T 3191-2018
1100 O H112 aluminum tube stock size range	Outer diameter×Wall thickness: 8×0.4, 7×0.4, 6.04×0.4, 8×0.5, 8×1, 10×1.25, 15.88×1.2, 9×2, 12×2, 16×2, 10×1.65, 11×1.8, 12×1.75, 14×1.75, 15.88×1.65, 18×2, 19.05×1.65, 12.7×1.2, 9.53×1, 16×1.5, 18×1.5

3 . Chemical composition of 1100 aluminum alloy

1100 Alloy %	
Si	0.95
Fe	
Cu	0.05 – 0.20
Mn	0.05
Mg	---
Cr	---
Ni	---
Zn	0.10
Ti	---
Al	Remainder

4 .

5 . Mechanical property of 1100 O H14 H18 aerospace aluminum tube pipe

Temper	Tensile (.0625" Dia. Specimen)					Hardness	Shear	
	Ultimate		Yield		Elongation/4D	Brinell 500kg 10 mm	Ultimate Shearing Strength	
	KSI	MPa	KSI	MPa	%		KSI	MPa
O	13	90	5	35	35	23	9	60
H14	18	125	17	115	9	32	11	75
H18	24	165	22	150	5	44	13	90

Characteristic		Metric
Nominal Density (68° F/20° C) English: lbs./in. ³ Metric: g/cm ³		2.71
Melting Range		640° C – 655° C
Coefficient of Thermal Expansion English: micro in./in. –° F Metric: micro m/m –° K	Linear 68° F–212° F 20° C–100° C	23.6
Thermal Conductivity (68° F/20° C)	O	222
	H18	218

English: BTU-in/ft ² hr° F Metric: W/m×K			
Electrical Conductivity (68° F/20° C) English: %IACS @ 68° F Metric: MS/M @ 20° C	Equal Volume	O Temper	34
		H18	33
	Equal Weight	O Temper	113
		H18	108

6 . Features of 1100 aerospace aluminum tube pipe

High corrosion resistance: 1100 aluminum pipe is suitable for usage in a range of chemical situations, particularly those that are maritime.

Good thermal conductivity: 1100 aluminum tube is used extensively in radiators, heat exchangers, and other applications due to its exceptional thermal conductivity and ability to transmit heat efficiently.

Processing ease: 1100 aluminum tube may be made using a variety of processing methods, including cold drawing, welding, bending, cutting, and more. It also has outstanding machinability.

Lightweight and strong: 1100 aluminum pipes are ideal for producing lightweight parts because of their low relative density, light weight, high strength, and rigidity.

Good resistance to oxidation: The surface of 1100 aluminum tubes readily forms a protective coating of aluminum oxide, which can successfully stop more oxidation of aluminum and preserve its physical characteristics.

7 . Types and uses of 1100 O H14 H18 H112 aluminum tube pipe in aerospace field

Aluminum seamless drawn tube 1100-H14 is primarily utilized as a lightweight, high-strength structural material in the military, aerospace, and other industries. This aluminum alloy pipe can satisfy the needs of high

strength and low weight, and it has superior formability and welding performance. It is frequently used to create hydraulic pipes, air pipes, oil pipes for airplanes, support structures, and other parts.

It is typically utilized to make parts like fuel tanks, fuel pipes, and so forth that need to be highly intense and resistant to corrosion.

Applications requiring high strength and hardness, as well as those requiring corrosion and wear resistance, like food processing equipment, chemical equipment, and seawater treatment equipment, can benefit from the higher hardness of 1110-H18 aluminum tube compared to 1110-H14.

The two most frequent tempers for aluminum heat exchanger tubes are O (soft temper) and H112 (semi-hard temper). The parameters are typically tailored to the particular needs of the heat exchanger. There are two methods for producing 1100 aluminum tubes: seamless and welded. In summary, the real circumstances of the heat exchanger must be taken into consideration while choosing and customizing the temper, specification, and process of 1100 aluminum alloy pipes.

Aluminum HVAC tubing often needs to be highly cost-effective, thermally conductive, and resistant to corrosion. Heat pipes, cable protection sleeves, and other air conditioning system components are frequently made with 1100 pure aluminum tubing because of its high thermal conductivity and ease of processing.

8 . What should I pay attention to when buying 1100 aerospace aluminum tubes?

Requirements for specifications: choose the right specifications based on the necessary use cases and needs, such as wall thickness, length, diameter, etc.

Temper requirements: choose the right temper based on your actual demands. For instance, O-temper aluminum tubes can be bent and formed, whereas H14

temper aluminum tubes are excellent for situations when greater strength is needed.

Verify the quality: To make sure the aluminum tube satisfies the standards, make sure its surface is smooth and free of cracks, oxidation, corrosion, etc.

Selecting a supplier: To guarantee product quality and the dependability of after-sales service, pick suppliers with a solid reputation, production qualifications, and excellent after-sales service.

Logistics and transportation: to guarantee product quality, precautions should be taken to prevent impact and friction damage to the aluminum tube while also preventing deformation.