



TECHNICAL DATA SHEET

PRODUCT: A95056 ALUMINUM ALLOY COIL / SHEET

5005 aluminum alloy is a 5000-series aluminum alloy, and it is a non-heat treatable alloy with small amount of magnesium content. It is formulated for primary forming into wrought products. It is not used in casting. It can attain moderate to high strength by cold working. It has very good resistance to atmospheric corrosion and very good weldability that is highly suitable for decorative anodizing, and has relatively high welded strength compared to other aluminum alloy families.

PRODUCT BASIC INFORMATION:

Alloy:	5005
Form:	Sheet, Coil
Temper:	O, H22, H32, H24, H34, H28, H38
Dimension:	Thickness: 0.50mm to 6.0mm Width: 20.0mm to 2,000mm Length: 1,000mm to 4,000mm, or Coil
Surface Finish:	Mill Finish
Standard Specification:	GB/T 3880, ASTM B209, EN 485
Application:	General Use

CHEMICAL COMPOSITION:

Element		Percentage (%)
Aluminum	(Al)	Remainder
Silicon	(Si)	0.30 max
Iron	(Fe)	0.70 max
Copper	(Cu)	0.20 max
Manganese	(Mn)	0.20 max
Magnesium	(Mg)	0.50~1.1
Chromium	(Cr)	0.10 max
Zinc	(Zn)	0.25 max
Titanium	(Ti)	-
Remainder Each		0.05 max
Remainder Total		0.15 max

MECHANICAL PROPERTIES:

		O	H22/H32	H24/H34	H28/H38
Ultimate Strength Rm/MPa		290 typical	125~165	145~185	≥ 185
Yield Strength Rp0.2/MPa		152 typical	≥ 80	≥ 110	≥ 160
Elongation Min. %	≥ 0.5~1.5mm	35 typical	≥ 5%	≥ 4%	≥ 2%
	≥ 1.5~3.0mm	--	≥ 6%	≥ 5%	≥ 3%
	≥ 3.0~6.0mm	--	≥ 8%	≥ 6%	-
Bend Radius (90°)	≥ 0.5~1.5mm	0t	0.5t	1.0t	2.5t
	≥ 1.5~3.0mm	0t	1.0t	1.0t	3.0t
	≥ 3.0~6.0mm	1.0t	1.0t	2.0t	-

PHYSICAL DATA :

Density (20°C):	2,64	kg/m ³
Melting Point:	568.3 - 638°C	
Thermal Expansion (20°C ~100°C):	24.1 x10 ⁻⁶	/C°
Modulus of Elasticity:	71.0	GPa
Thermal conductivity (Temper O):	117	W·m-1·K-1
Electrical Resistivity (Temper O):	0.00000598 ohm-cm	Ω .m
Conductivity (Temper O):	--	%IACS
Magnetic performance:	No	
Color:	Silver	
Odour:	No	

TOLERANCE ON FORMS AND DIMENSIONS :

Thickness Tolerance:	Thickness	Width			
		≤1000mm	>1000~1250mm	>1250~1600mm	>1600~2000mm
	≥ 0.5~0.6mm	± 0.03mm	± 0.05mm	± 0.06mm	± 0.07mm
	> 0.6~0.8mm	± 0.03mm	± 0.06mm	± 0.07mm	± 0.08mm
	> 0.8~1.0mm	± 0.04mm	± 0.06mm	± 0.08mm	± 0.09mm
	> 1.0~1.2mm	± 0.04mm	± 0.07mm	± 0.09mm	± 0.10mm
	> 1.2~1.5mm	± 0.05mm	± 0.09mm	± 0.10mm	± 0.11mm
	> 1.5~1.8mm	± 0.06mm	± 0.10mm	± 0.11mm	± 0.12mm
	> 1.8~2.0mm	± 0.06mm	± 0.11mm	± 0.12mm	± 0.14mm
	> 2.0~2.5mm	± 0.07mm	± 0.12mm	± 0.13mm	± 0.15mm
	> 2.5~3.0mm	± 0.08mm	± 0.13mm	± 0.15mm	± 0.17mm
	> 3.0~3.5mm	± 0.10mm	± 0.15mm	± 0.17mm	± 0.18mm
	> 3.5~4.0mm	± 0.15mm	± 0.20mm	± 0.22mm	± 0.23mm
	> 4.0~5.0mm	± 0.18mm	± 0.22mm	± 0.24mm	± 0.25mm
	> 5.0~6.0mm	± 0.20mm	± 0.24mm	± 0.25mm	± 0.26mm

Width Tolerance:	Thickness	Width				
		≤300mm	>300~500mm	>500~1250mm	>1250~1650mm	>1650mm
	≥ 0.2~0.6mm	+ 0.4mm	+ 0.6mm	+ 1.5mm	+ 2.5mm	+ 3.0mm
	> 0.6~1.0mm	+ 0.5mm	+ 1.0mm	+ 1.5mm	+ 2.5mm	+ 3.0mm
	> 1.0~2.0mm	+ 0.7mm	+ 1.2mm	+ 2.0mm	+ 2.5mm	+ 3.0mm
	> 2.0~3.0mm	+ 1.0mm	+ 1.5mm	+ 2.0mm	+ 2.5mm	+ 4.0mm
	> 3.0~6.0mm	+ 1.5mm	+ 2.0mm	+ 3.0mm	+ 3.0mm	+ 5.0mm

Length Tolerance:	Thickness	Length			
		≤1000mm	>1000~2000mm	>2000~3000mm	>3000mm
	≥ 0.2~3.0mm	+ 3mm	+ 4mm	+ 6mm	+ 8mm
	> 3.0~6.0mm	+ 4mm	+ 6mm	+ 8mm	+ 10mm

Flatness Tolerance:	Thickness	Total Deviation		
		On Length	On Width	Partial Deviation
	≥ 0.2~0.5mm	By agreement	By agreement	By agreement
	> 0.5~3.0mm	≤ 0.4%	≤ 0.5%	≤ 0.5%
	> 3.0~6.0mm	≤ 0.3%	≤ 0.4%	≤ 0.4%

Lateral Curvature Tolerance:	Width	Lateral Curvature for Specified Length			
		≤1000mm	>1000~2000mm	>2000~3500mm	>3500mm
	≤300mm	≤ 2.0mm	≤ 4.0mm	≤ 8.0mm	-
	>300~600mm	≤ 1.5mm	≤ 3.0mm	≤ 5.0mm	-
	>600~1000mm	≤ 1.0mm	≤ 2.0mm	≤ 4.0mm	≤ 5.0mm
	>1000~2000mm	-	≤ 2.0mm	≤ 4.0mm	≤ 5.0mm
	>2000mm	-	-	≤ 4.0mm	≤ 5.0mm

Squareness Tolerance:	Length	Squareness Tolerance for Specified Width			
		≤1000mm	>1000~1500mm	>1500~2000mm	>2000mm
	≤1000mm	≤ 4.0mm	-	-	-
	>1000~2000mm	≤ 4.0mm	≤ 5.0mm	≤ 6.0mm	-
	>2000~3000mm	≤ 5.0mm	≤ 5.0mm	≤ 7.0mm	≤ 8.0mm
	>3000~5000mm	≤ 6.0mm	≤ 8.0mm	≤ 8.0mm	≤ 10.0mm

OTHER PROPERTIES:

Principal Design Features

Contain have strong corrosion resistance characteristics and high electrical conductivity. These alloys obtain high strength when exposed to subzero temperatures and vice versa between 200 and 250°C (392 and 482°F).

Machinability

This alloy is not noted for ease of machinability. It is relatively difficult to machine for an aluminium alloy and is considered only "fair" in terms of overall machinability. It tends to be "gummy" and thus needs care to produce a good machined finish.

Forming

Forming by conventional means of this alloy may be readily accomplished. The alloy may be cold-worked or hot-worked with ease.

Weldability	5656 aluminum alloy may be welded by conventional methods. Arc, gas torch, and resistance welding are the most commonly used processes. Filler metal, when required, should be AL 5457 or AL 5056 or 5052. The alloy may also be joined by brazing, although this requires special techniques and actual trial evaluation.
Heat Treatment	While it will lose strength if subjected to high temperatures (390°F to 480°F), its strength can be increased via cold working (note: aluminum 5056 cannot be heat-treated).
Hot Working	Hot working of 5656 aluminum alloy may be easily accomplished, if necessary, in the range of 700 to 450 F.
Cold Working	Cold working of 5656 aluminum alloy is easily accomplished by standard commercial means in the soft tempers. The alloy may also be successfully cold worked in the harder tempers, but with more difficulty.
Annealing	Annealing, to obtain O temper, of cold worked material is done at 775 F and air cooled. A stress-relief anneal may be done at 460 F for 3 hours followed by air cooling.
Aging	Not applicable to this alloy.
Hardening	Hardens only due to cold working.

APPLICATIONS

Typical Applications	Aluminum 5056 is commonly used to construct fuel tanks, maritime structures, and other structures where corrosion resistance is essential. Because of its good workability and relatively low strength, 5052 is also employed in sheet metal work, appliances, and cookware. On the other hand, Aluminum 5056 is often used in the aerospace industry, particularly for constructing wings and fuselages. Due to its higher strength and hardness can also be used in applications requiring greater structural strength.
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PACKAGING, HANDING & STORAGE:

Package:	Packed in waterproof Kraft, fastened by steel straps on wood pallets, suitable for handling, loading and unloading from the trunks or containers, suitable for export ocean forwarding.
Handling:	Prevent the goods hurting the people who are moving, loading, unloading, especially pay attention to the rolling and dropping for the coils.
Storage:	Stored in indoor area on plain floor, free away from moisture, water, snow, animal oils and dye wastes, avoid storing with acid or basic chemical goods.

