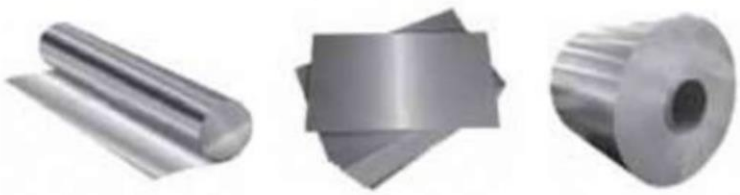
ALUMINUM FLAT ROLLED Product



AMASPRO INC.

AMERICA & ASIA PRODUCTS











PROFESSIONAL
RELIABLE
EFFICIENT

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America & Asia Products, Inc
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Panamá, Republica de Panamá

Exportador más grande de Asia para América Latina

This valuable metal possesses the whiteness of silver, the indestructibility of gold, the tenacity of iron, the fusibility of copper, the lightness of glass. It is easily wrought, is very widely distributed, forming the base of most rocks, is three times lighter than iron, and seems to have been created for express purpose of furnishing us with the material for our projectile."

- Jules Vernes, "From the Earth to the Moon", 1865





ADVANTAGES

- LONG-LASTING
- STRONG
- LIGHT
- BEAUTIFULL
- ABUNDANT



- EASY FORMING
- VERY DUCTILE
- COST SAVING
- ODORLESS & HARMLESS
- EXCELLENT HEAT CONDUCTOR
- HIGHLY CORROSION RESISTANT
- EXCELLENT ELECTRICAL CONDUCTOR
- GOOD REFLECTIVE PROPERTIES
- INFINITELY RECYCLABLE
- ENERGY CONSERVATION

STANDARD SPECIFICATION

This product will be strictly produced according to national or international standard, or sometimes to mutually agreed standard.

CHINESE STANDARD

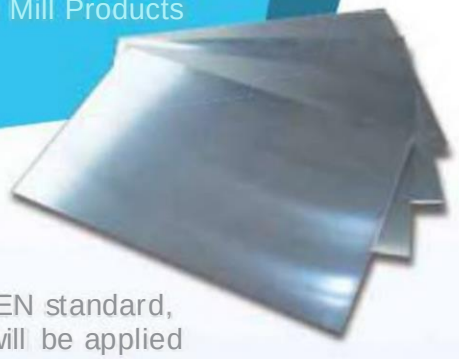
GB/T 3190	Wrought Aluminum and Aluminum Alloy Chemical Composition
GB/T 3880	Wrought Aluminum and Aluminum Alloy Plates, Sheets and Strips for General Engineering
GB/T 3618	Wrought Aluminum and Aluminum Alloys Tread Sheets
GB/T 3198	Aluminum and Aluminum Alloy Foils
YSIT 431	Aluminum and Aluminum Alloys Coil Coated Sheet and Strip

EUROPEAN STANDARD

EN 573	Aluminum and Aluminum Alloys Chemical Composition and Form ofWrought Products
EN 485	Aluminum and Aluminum Alloys Sheet, Strip and Plate
EN 546	Aluminum and Aluminum Alloys Foil

AMERICAN STANDARD

ASTM B209	Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate
ANSI35.1	Alloy and Temper Designation Systems for Aluminum
ANSI 35.2	Dimensional Tolerances for Aluminum Mill Products



NOTE/

Chinese Standard is able to cover both ASTM and EN standard, unless otherwise specified, Chinese GB Standard will be applied

ALLOY DESIGNATIONS

Comparison of alloy designations for aluminum flat products

Alloy Series	Chinese Standard	American Standard	European Standard
1xxx Series	1050		
	1050A		ENAW-1050A
	1060	1060	
	1100	1100	
	1200		ENAW-1200
	1145	1145	
	1235	1235	ENAW-1235
2xxx Series	2014	2014	EN AW-2014
	2017		
			ENAW-2017A
	2024	2024	EN AW-2024
3xxx Series	3003	3003	ENAW-3003
	3004	3004	ENAW-3004
	3005	3005	ENAW-3005
	3105	3105	EN AW-3105
5xxx Series	5005	5005	ENAW-5005
	5052	5052	ENAW-5052
		5754	ENAW-5754
	5083	5083	ENAW-5083
6xxx Series	6061	6061	EN AW-6061
	6082		ENAW-6082
7xxx Series	7075	7075	ENAW-7075
8xxx Series	8011		
	8011A		EN AW-8011A
	8079		ENAW-8079

TEMPER DESIGNATIONS

Temper	Definition
F	As fabricated (no mechanical property limits specified)
0	Annealed
H12	Strain Hardened, 1/4 Hard
H14	Strain Hardened, 1/2 Hard
H16	Strain Hardened, 3/4 Hard
H18	Strain Hardened, 4/4 Hard (fully hardened)
H19	]ain HardSentred, Extra Hard
H22	Strain Hardened and Partially Annealed, 1/4 Hard
H24	Strain Hardened and Partially Annealed, 1/2 Hard
H26	Strain Hardened and Partially Annealed, 3/4 Hard
H28	Strain Hardened and Partially Annealed, 4/4 Hard (fully hardened)
H32	Strain Hardened and stabilized, 1/4 Hard
H34	Strain Hardened and stabilized, 1/2 Hard
H36	Strain Hardened and stabilized, 3/4 Hard
H38	Strain Hardened and stabilized, 4/4 Hard (fully hardened)
H111	Annealed and slightly strain hardened (less than H11)
H112	Slightly strain harden from working at an elevated temperature or from limited amount of cold work
H116	Applies to alloys in the Sxxx series with a magnesium content of 3% or more, slightly strain harden at last operation, exfoliation and intergranular corrosion resistance are specified.
H321	Applies to alloys in the Sxxx series with a magnesium content of 3% or more, strain hardened and stabilized at last operation, exfoliation and intergranular corrosion resistance are specified.
H42	Strain Hardened and painted or lacquered, 1/4 Hard
H44	Strain Hardened and painted or lacquered, 1/2 Hard
H46	Strain Hardened and painted or lacquered, 3/4 Hard
H48	Strain Hardened and painted or lacquered, 4/4 Hard (fully hardened)
T351	Solution heat-treated, cold worked, stress relived by stretching, and naturally aged
T4	Solution heat-treated and naturally aged
T451	Solution heat-treated, stress relived by stretching, and naturally aged
T6	Solution heat-treated and then artificially aged
T651	Solution heat-treated, stress relived by stretching, and artificially aged

ALUMINUM AND ALUMINUM ALLOY SHEET AND PLATE

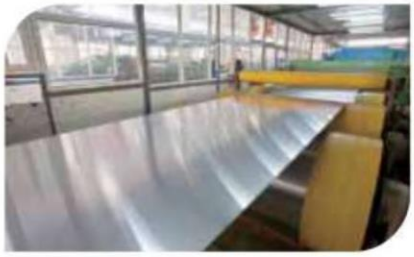
Standard Specification/ GB/T 3880, ASTM B209, EN 485

Alloy and Temper:

Alloy	Temper
1xxx: 1050, 1050A, 1060, 1100	0, H112, H12, H14, H16, H18, H22, H24, H26
3xxx: 3003, 3004, 3005, 3105	
5xxx: 5005, 5052, 5754, 5083	0, H111, H112, H22, H24, H26, H28, H32, H34, H36, H38
6xxx: 6061, 6082	T4, T451, T6, T651
2xxx:2014, 2017, 2024	T351, T451
7xxx: 7075	T651
*H116 and H321 for alloy 5083 are provided as per Mill's Standard or by agreement	

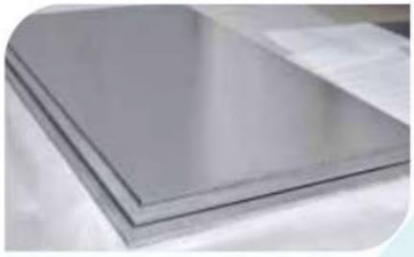
AVAILABLE SIZE RANGE

Dimension	Range
Thickness:	0.5 ~ 6.0mm for sheet, 6.0 ~ 120mm for plate
Width:	900 - 2,200mm
Length:	2,000 - 10,000mm



STANDARD WIDTH AND LENGTH

10002000mm, 1250x2500mm, 1500x3000mm, 1219x2438mm, 1524x3048mm



SURFACE FINISH

Mill Finish, unless otherwise specified



SURFACE PROTECTION

Paper interleaved, PE/PVC filming (if specified)

ALUMINUM AND ALUMINUM ALLOY STRIP AND COIL

Standard Specification/ GB/T 3880, ASTM B209, EN 485

Alloy and Temper:

Alloy	Temper
1xxx: 1050, 1050A, 1060, 1100	O,F, H12, H14, H16, H18, H22, H24, H26,H28
3xxx: 3003, 3004, 3005, 3105	
5xxx: 5005, 5052, 5754, 5083	O, F, H22, H24, H26, H28, H32, H34, H36, H38

AVAILABLE SIZE RANGE

Dimension	Range
Thickness:	0.2 - 4.0mm
Width:	200 - 2,200mm



STANDARD WIDTH

1000mm, 1250mm, 1500mm, 1219mm, 1524mm



SURFACE FINISH

Mill Finish, unless otherwise specified

SURFACE PROTECTION

Without paper interleaved for all aluminum coils
With PE/PVC filming on main side (if specified)



COIL ID

405mm, 505mm

ALUMINUM AND ALUMINUM ALLOY FOIL

Standard Specification/ GB/T 3198, EN 546

Alloy and Temper:

Alloy	Temper
1xxx: 1050, 1050A, 1060, 1100 1145, 1235, 1200	O, H14, H16, H18, H19, H22, H24, H26
3xxx: 3003	
Bxxx: 8011, 8011A,8079	O, H18, H19, H22, H24, H26

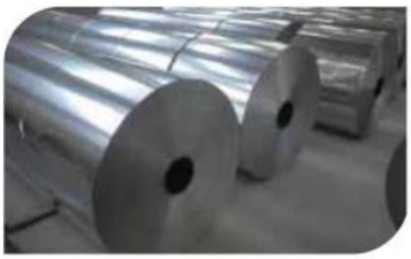
AVAILABLE SIZE RANGE

Dimension	Range
Thickness:	0.006 - 0.2mm
Width:	200 - 1,800mm



SURFACE CONDITION

One side bright, the other side matte (for double rolled)
Two sides bright (for single rolled)



SURFACE TREATMENT

Lubrication, Lamination, Coating

CORE TYPE AND SIZE

Type: Aluminum, Steel, Fiber
Core ID: 75mm, 76.2mm, 150mm, 152.4mm, 300mm, 400mm



ALUMINUM AND ALUMINUM ALLOY TREAD SHEET

Standard Specification/ GB/T 3618, Base material conforms to GB/T 3880

Alloy and Temper:

Alloy	Temper	Remarks
1xxx: 1050, 1060, 1100	O, H114, H194	H114 fabricated from Temper 0 H194 fabricated from Temper H18
3xxx: 3003,3105 Temper H12, H14, H22, H24, H32 and H34,		
50x. 5052, 5754	0, H114	which are applied to base material, are provided as per client's request and mutually agreed

AVAILABLE SIZE RANGE

Dimension:	Thickness	Width	Length
Range	1.5-4.5mm	1,000-1.600mm	2,000-4.000mm

SURFACE FINISH

Bright Finish, Mill Finish

PATTERN TYPE

Small Five Bar, Big Five Bar, Diamond

RAISED PATIERN

Pattern Type:	Small Five Bar	Big Five Bar	Diamond
Pattern Height	1.0mm, +/-0.4mm	1.0mm, +/-0.4mm	1.0mm, +/-0.4mm
Pattern Length	35mm, +/-3.0mm	45mm, +/-3.0mm	33mm, +/-2.0mm

SURFACE PROTECTION

With paper interleaved



Small Five Bar



Big Five Bar



Diamond

ALUMINUM AND ALUMINUM ALLOY EMBOSSED SHEET

Standard Specification/ Base material conforms to GB/T 3880

Alloy and Temper:

Alloy	Temper
1xxx: 1050, 1060, 1100	O,H12,H14, H22,H24
3xxx: 3003	

> AVAILABLE SIZE RANGE

Dimension	Range
Thickness:	0.3-1.5mm for coil 0.5-1.5mm for sheet
Width:	**1,000~1250mm**
Length:	Coiled, or 2,000-4,000mm

> THE EMBOSSED PATTERN SHALL BE USUALLY CONFIRMED BY CUSTOMER WHEN PLACING ORDER



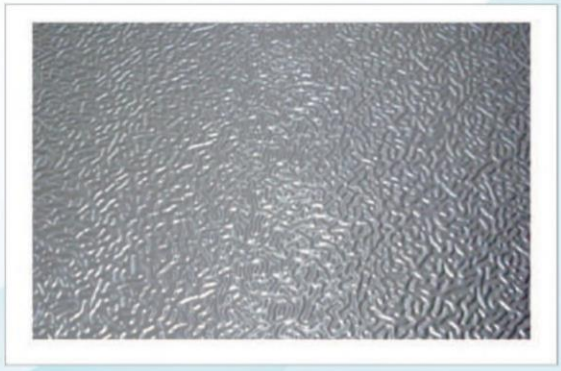
#1 Classical



#2 Varied



#3 Varied



#4 Varied

ALUMINUM AND ALUMINUM ALLOY DISC

Standard Specification/ GB/T 3880

Alloy and Temper:

Alloy	Temper
1xxx: 1050, 1060, 1070, 1100	O, H14, H24
3xxx: 3003	0, H12, H14, H22, H24
5xxx: 5052	0, H22, H24, H32, H34
6xxx: 6061	0, T4

AVAILABLE SIZE RANGE

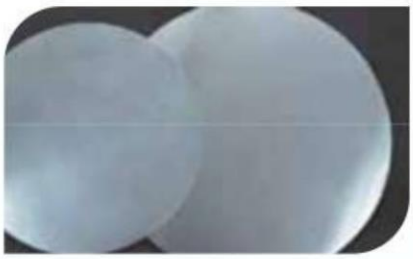
Dimension	Range
Thickness:	0.5 ~ 4.0mm
Diameter:	150 - 1,000mm

Note/ the diameter to be a multiple of 5mm due to the limit of die



DIAMETER TOLERANCE

Nominal Diameter	Tolerance
Multiple of 5mm	+/- 0.5mm
Non-multiple of 5mm	+/- 3.0mm



SURFACE PROTECTION

With PE/PVC coating on main side (if specified)



COATED ALUMINUM AND ALUMINUM ALLOY COIL AND SHEET

Standard Specification/

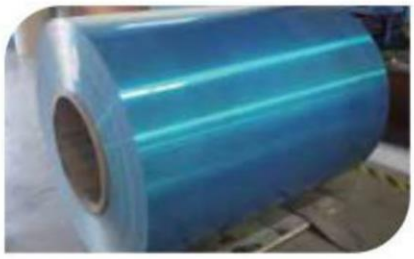
YS/T 431, GB/T17748, Mill's Standard, Mutually Agreed Standard
Based material conforms to GB/T 3880

Alloy and Temper:

Alloy	Temper	Remarks
1x0x: 1050, 1100	H42, H44,H46,H48	* Temper H12, H14, H16, H18, H22, H24, H32 and H34, for base material, are provided as per client's request and mutually agreed
3xxx: 3003, 3105		
5xxx: 5005, 5052		

AVAILABLE SIZE RANGE

Dimension	Range
Thickness:	0.25 ~ 1.8mm
Diameter:	500 ~ 1 ,550mm
Length:	Coiled, or 2,000-4,000mm



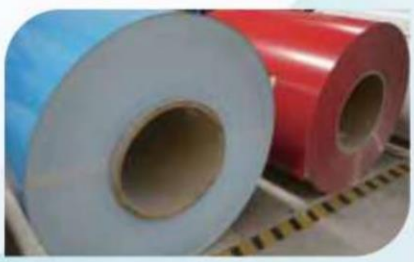
COATING

Paint:	PE (Polyester), PVDF
Thickness:	Front > 18 microns (PE), >24 microns (PVDF)
	Back > 8~10 microns (PE or EP)
Color:	RAL colors or by confirmed sample



GLOSS

20% to 80%, depends on client's requirement



SURFACE PROTECTION

With PE/PVC film on main side (if specified}

TOLERANCE CONTROL

Thickness Tolerances for Cold Rolled Sheet, Coil, Strip and Disc

Specified Thickness	Specified Width			
	=<1000mm	>1000~1250mm	>1250~1600mm	>1600~2000mm
0.2-0.4mm	+1- 0.02mm	+1- 0.03mm	+/- 0.03mm	-
>0.4-0.6mm	+/- 0.03mm	+/- 0.04mm	+1- 0.04mm	+1- 0.04mm
>0.6-0.8mm	+/- 0.03mm	+1- 0.05mm	+/- 0.05mm	+1- 0.07mm
>0.8-1.0mm	+1- 0.04mm	+/- 0.06mm	+/- 0.07mm	+/- 0.08mm
>1.0-1.2mm	+1- 0.04mm	+/- 0.07mm	+/- 0.07mm	+1- 0.09mm
>1.2-1.5mm	+/- 0.05mm	+/- 0.08mm	+1- 0.08mm	+1- 0.11 mm
>1.5-2.0mm	+1- 0.06mm	+1- 0.09mm	+1- 0.09mm	+1- 0.12mm
>2.0-3.0mm	+1- 0.07mm	+/- 0.09mm	+/- 0.09mm	+1- 0.15mm
>3.0-4.0mm	**+/-0.10mm**	+1- 0.15mm	+/- 0.16mm	+1- 0.18mm
>4.0-6.0mm	+1-0.18mm	+/- 0.22mm	+1- 0.22mm	+/- 0.25mm
>6.0-8.0mm	+1- 0.24mm	+/- 0.28mm	+1- 0.28mm	+/- 0.30mm

Thickness Tolerances for Hot Rolled Plate

Specified Thickness	Specified Width		
	>1000-1250mm	>1250-1600mm	>1600-2000mm
6.0-8.0mm	+1- 0.35mm	+1- 0.40mm	+1- 0.40mm
>8.0-10.0mm	+1- 0.45mm	+/- 0.50mm	+1- 0.50mm
>10.0-15.0mm	+1- 0.50mm	+/- 0.60mm	+1- 0.65mm
>15.0-20.0mm	+1- 0.60mm	+/- 0.70mm	+1- 0.75mm
>20.0-30.0mm	+1- 0.65mm	+/- 0.75mm	+/- 0.85mm
>30.0-40.0mm	+/- 0.75mm	+/- 0.85mm	+1- 1.00mm
>40.0-50.0mm	+1- 0.90mm	+/- 1.00mm	+/- 1.10mm
>50.0-60.0mm	+/- 1.10mm	+1- 1.20mm	+/- 1.40mm
>60.0-80.0mm	+1- 1.40mm	+/- 1.50mm	+/- 1.70mm
>80.0-100.0mm	+/- 1.70mm	+1- 1.80mm	+/- 1.90mm
>100.0-150.0mm	+/- 2.10mm	+/- 2.20mm	+/- 2.50mm

Thickness Tolerances for Foil

Specified Thickness(T)	Tolerance (%)
0.006 - 0 .009mm	+1- 6% T
>0.009 - 0.200mm	+/- 5% T

Width Tolerances for Foil, Strip and Coil

Specified Thickness	Specified Width				
	300mm	>300- 500mm	>500- 1250mm	>1250- 1650mm	>1650 - 2000mm
0.006-0.200mt	+/- 1.0mm	+1- 1.0mm	+/- 1.0mm	+/- 2.0mm	+/- 2.0mm
>0.20-0.60mm	+ 0.4mm	+ 0.6mm	+ 1.5mm	+ 2.5mm	+ 3.0mm
>0.60-1.00mm	+ 0.5mm	+ 1.0mm	+ 1.5mm	+ 2.5mm	+ 3.0mm
>1.00-2.00mm	+ 0.7mm	+ 1.2mm	+2.0mm	+ 2.5mm	+ 3.0mm
>2.00-4.00mm	+ 1.0mm	+ 1.5mm	+2.0mm	+ 2.5mm	+ 4.0mm

Flatness Tolerances for Sheet and Plate

Specified Thickness	Total Deviation %		Partial Deviation %(for a chord of at least 300mm) dmax/l
	On Length dmax/L	On Width dmax/W	
>0.20-0.50mm	By agreement	By agreement	By agreement
>0.50-3.0mm	0.4%	0.5%	0.5%
>3.0-6.0mm	0.3%	0.4%	0.4%
>6.0-50mm	0.2%	0.4%	0.3%

Note:
L=Length of the sheet or plate, W=width of the sheet or plate, d=deviation from flatness, l=length of chord

Squareness Tolerances for Sheet and Plate

Specified Length	Specified Thickness	Squareness tolerances for specified width		
		<1000mm	>1000-1500mm	>1500-2000mm
<1000mm	<6.0mm	4mm	-	-
	>6.0mm	5mm	-	-
> 1000-2000mm	<6.0mm	4mm	5mm	6mm
	>6.0mm	5mm	7mm	8mm
>2000-3000mm	<6.0mm	5mm	5mm	7mm
	>6.0mm	7mm	7mm	9mm
>3000-5000mm	<6.0mm	6mm	8mm	8mm
	>6.0mm	8mm	10mm	10mm
>5000mm	<6.0mm	10mm	10mm	12mm
	>6.0mm	12mm	12mm	15mm

DENSITY & THEORETICAL WEIGHT

Density of Aluminum and Aluminum Alloy

Alloy	Density (kg/m?)	Alloy	Density (kg/m?')	Alloy	Density (kg/m?)	Alloy	Density (kg/m?)
1050, 1050A	2,705	2014	2,800	3105	2,720	6082	2,700
1060	2,705	2017	2,790	5005	2,700	7075	2,810
1100	2,710	2024	2,780	5052	2,680	8011	2,710
1145	2,700	3003	2,730	5083	2,660	80 11A	2,710
1200	2,700	3004	2,720	5754	2,670	8079	2,720
1235	2,705	3005	2,730	6061	2,700		

THEORETICAL WEIGHT

» Sheet and Plate (Plain)

3HIE Theoretical Weight of Pcs = Thickness x Wrath x Length x Density = Kgs/pcs

For Example Theoretical Weight per pcs for standard size:

Standard Size	Weight/pcs
1.0 x 1000 x 2000mm	5.400 kgs
1.0x 1250 x 2500mm	8.438 kgs
1.0 x 1500 x 3000mm	12.150kgs
1.0 X 1219 x 2438mm	8.024 kgs
1.0 x 1524 x 3048mm	12.542 kgs
Note: Based on density of 2700 kg/m°	

» Disc

IZIE

Theoretical Weight of Pcs = Thickness x 3.14 x (Diameter/2) x Density= Kgs/pcs

For Example

Alloy 1050, Thickness 3.0mm x Diameter 500mm

Weight/pcs = 3.0 x 10-3 x 3.14 x(0.5/2)x 2705 = 1.593 kgs/pcs

PACKAGE DIMENSION

For Reference Only

Estimated height of pallet and outside diameter of coil

For Sheet & Plate(Plain)				For Coil(Coil ID is 505mm)		
Standard Size mm	Pallet Weight Kg	Estimated PCS for Thickness 1.0mm only	Estimated Pallet Height for any thickness	Standard Size mm	Coil Weight Kg	Estimated Coil OD for any thickness
1000 x 2000	1,000	185 pcs	335mm	1000 x C	2,500	1,240mm
	1,500	278 pcs	428mm		3,000	1,340mm
	2,000	370 pcs	520mm		4,000	1,520mm
	2,500	463 pcs	613mm		5,000	1,680mm
1250 x 2500	1,000	119 pcs	269mm	1250 x C	2,500	1,135mm
	1,500	178 pcs	328mm		3,000	1,220mm
	2,000	237 pcs	387mm		4,000	1,375mm
	2,500	296 pcs	446mm		5,000	1,520mm
1500 x 3000	1,000	82 pcs	232mm	1500 x C	2,500	1,055mm
	1,500	123 pcs	273mm		3,000	1,135mm
	2,000	165 pcs	315mm		4,000	1,275mm
	2,500	206 pcs	356mm		5,000	1,400mm
1219 x 2438	1,000	125 pcs	275mm	1219xC	2,500	1,145mm
	1,500	187 pcs	337mm		3,000	1,230mm
	2,000	249 pcs	399mm		4,000	1,390mm
	2,500	312 pcs	462mm		5,000	1,535mm
1524 x 3048	1,000	80 pcs	230mm	1524 x C	2,500	1,050mm
	1,500	120 pcs	270mm		3,000	1,125mm
	2,000	159 pcs	309mm		4,000	1,265mm
	2,500	199 pcs	349mm		5,000	1,390mm

'NOTE/ Based on density of 2,700 kg/m°



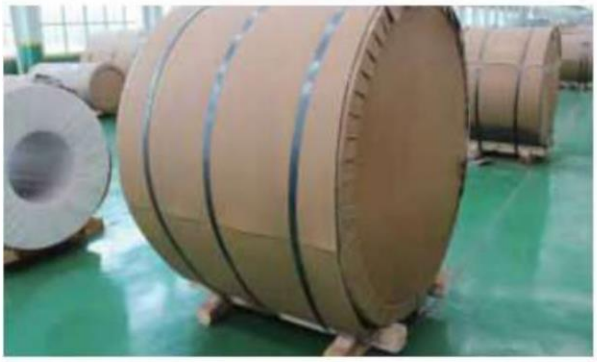


STANDARD EXPORT PACKAGING

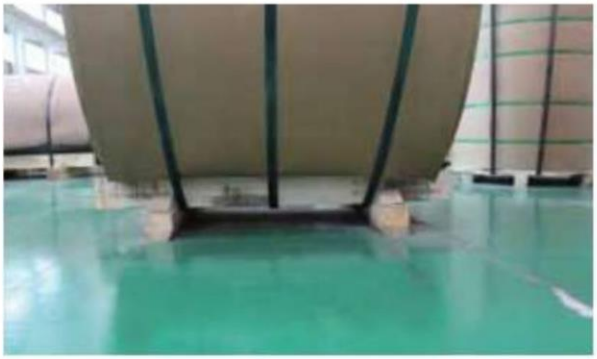
EYE TO SIDE

Coil Weight/ 2.0-6.0MT

To be recommended when the coil width is
less than 1200mm to maximize container loading





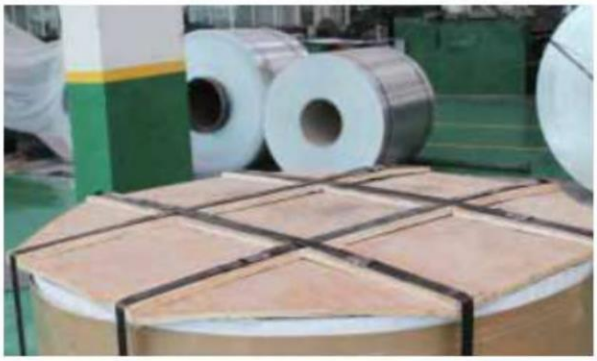


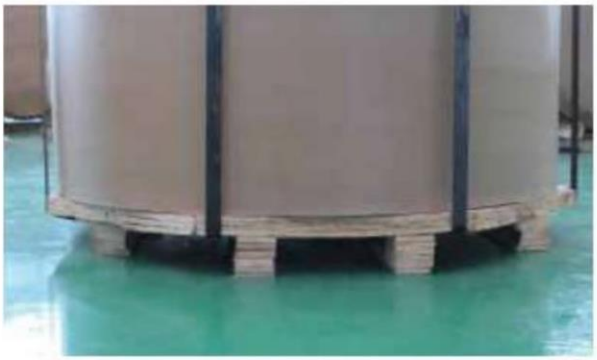
EYE TO SKY

Coil Weight/ 2.0-3.0MT

To be recommended when the coil width is
over 1200mm to maximize container loading and
coil weight to be about 2.5MT





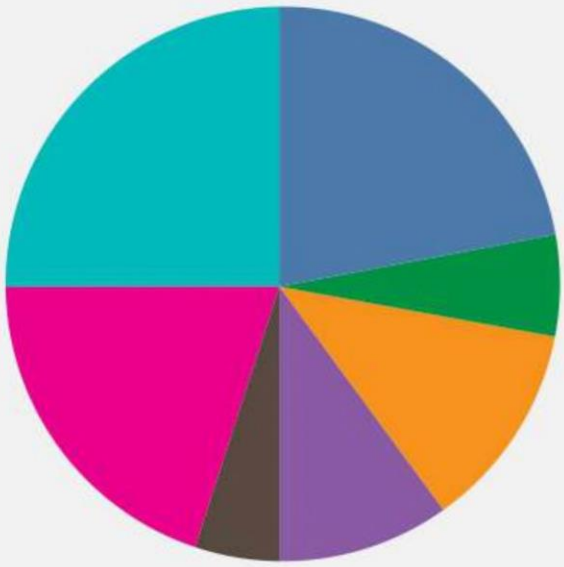


APPLICATION

Aluminum & its alloy are widely used in more than 90% of the industries in the world, especially in transportation, construction, packaging, appliances and equipment.

ALUMINUM APPLICATION

- Transportation
- Packaging & Vessel
- Others
- Machine & Equipment
- Electronics & Appliances
- Durable Goods
- Building & Construction



TRANSPORTATION

Aircraft & Aerospace
Automobile, Bus, Truck, Tank
Train, Metro Line
Ship, Boat, Yacht





BUILDING & CONSTRUCTION

Curtain Wall, Roofing
Decoration, Celling
Door, Window, Floor
Framework, Structure





PACKAGING & VESSEL

Can, Box, Case, Container
Seal, Lid, Cover
Flexible Package, Tube
Household Foil





ELECTRONICS & APPLIANCES

Computer, Laptop
Communication Tools
Consumer Electric
Heat Exchanger





MACHINE & EQUIPMENT

Catering Equipment
Textile Machinery
Precision Instrument
Medicall Equipment





DURABLE GOODS

Cookware, Kitchen Utensils
Lamp Cover, Air Outlet
Light Reflecting Plate
Traffic Sign, Nameplate

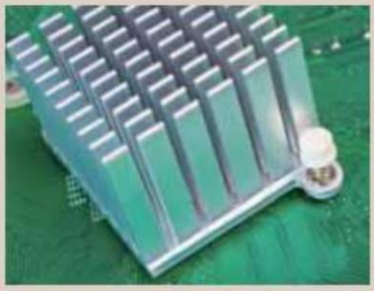




OTHERS

Furniture





ANNEX

Chemical Composition

Chemical Composition conforms to the standard specification of GB/T 3190, EN 573 and ASTM B209

Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others		Al
									Each	Total	Min.
1050	0.25	0.40	0.05	0.05	0.05	-	0.05	0.03	0.03	-	99.50
1050A	0.25	0.40	0.05	0.05	0.05	-	0.07	0.05	0.03	-	99.50
1060	0.25	0.35	0.05	0.03	0.03	-	0.05	0.03	0.03	-	99.60
1100	0.95 Si + Fe		0.05-0.20	0.05	-	-	0.10	-	0.05	0.15	99.00
1200	1.00 Si+ Fe		0.05	0.05	-	-	0.10	0.05	0.05	0.15	99.00
1145	0.55 Si+ Fe		0.05	0.05	0.05	-	0.05	0.03	0.03	-	99.45
1235	0.65 Si+ Fe		0.05	0.05	0.05	-	0.10	0.06	0.03	-	99.35
2014	0.5-1.2	0.7	3.9-5.0	0.4-1.2	0.2-0.8	0.10	0.25	0.15	0.05	0.15	remainder
2017	0.2-0.8	0.7	3.5-4.5	0.4-1.0	0.4-0.8	0.10	0.25	0.15	0.05	0.15	remainder
2024	[illegible]		3.8-4.9	0.3-0.9	1.2-1.8	0.10	0.25	0.15	0.05	0.15	remainder
3003	0.60	0.70	0.05-0.20	1.0-1.5	-	-	0.10	-	0.05	0.15	remainder
3004	0.30	0.70	0.25	1.0-1.5	0.8-1.3	-	0.25	-	0.05	0.15	remainder
3005	0.60	0.70	0.30	1.0-1.5	0.2-0.6	0.10	0.25	0.10	0.05	0.15	remainder
3105	0.60	0.70	0.30	0.3-0.8	0.2-0.8	0.20	0.40	0.10	0.05	0.15	remainder
5005	[illegible]		0.20	0.20	[illegible]		0.25	-	0.05	0.15	remainder
5052	0.25	0.40	0.10	0.10	2.2-2.8	0.15-0.35	0.10	-	0.05	0.15	remainder
5754	[illegible]		0.10	0.50	[illegible]		0.20	0.15	0.05	0.15	remainder
5083	[illegible]		0.10	0.4-1.0	4.0-4.9	0.05-0.25	0.25	0.15	0.05	0.15	remainder
6061	0.4-0.8	0.70	0.15-0.4	0.15	[illegible]	0.04-0.35	0.25	0.15	0.05	0.15	remainder
6082	[illegible]		0.10	0.4-1.0	0.6-1.2	0.25	0.20	0.10	0.05	0.15	remainder
7075	0.40	0.50	12-2.0	0.30	[illegible]	0.18-0.28	5.1-6.1	0.20	0.05	0.15	remainder
8011	0.5-0.9	0.6-1.0	0.10	0.20	0.05	0.05	0.10	0.08	0.05	0.15	remainder
8011A	0.4-0.8	0.5-1.0	0.10	0.10	0.10	0.10	0.10	0.05	0.05	0.15	remainder
8079	0.05-0.3	0.7-1.3	0.05	-	-	-	0.10	-	0.05	0.15	remainder

NOTE/

Limits are in mass percent maximum unless shown as a range or sated otherwise

MECHANICAL/rorroil PROPERTIES General Use

Alloy	Temper	Specified Thickness	Tensile Strength MPa		
1050 1060 1100 1145 1200 1235	0	0.006-0.009mm	40-100	-	
		> 0.009-0.025mm	40-105	-	>1.5%
		>0.025-0.040mm	50-105	-	> 2%
		>0.040-0.090mm	55-105		> 2%
		> 0.090-0.140mm	60-115	> 12%	-
		> 0.140-0.200mm	60-115	> 15%	-
	H22	0.006-0.025mm	-	-	-
		> 0.025-0.090mm	90-135	-	> 2%-3%
		> 0.090-0.200mm	90-135	> 4%-6%	-
	H14, H24	0.006-0.025mm	-	-	-
		> 0.025-0.090mm	110-160		> 2%-3%
		> 0.090-0.200mm	110-160	> 4%-6%	-
	H16, H26	0.006-0.025mm	-	-	-
		> 0.025-0.090mm	125-180	-	> 1%
		> 0.090-0.200mm	125-180	> 2%	-
	H18	0.006-0.200 mm	2140	-	-
	H19	0.006-0.200mm	2>150	-	-
3003	0	0.009-0.012mm	80-135	-	-
		> 0.012-0.200mm	80-140	-	-
	H22	0.020-0.050mm	> 90-130	-	> 3%
		>0.05-0.200mm	> 90-130	> 10%	
	H14	0.030-0.200mm	140-170	-	-
	H24	0.030-0.200mm	140-170	> 1%	-
	H16	0.100-0.200mm	2180	-	-
	H26	0.100-0.200mm	2180	> 1%	-
	H18	0.010-0.200mm	2190	> 1%	-
	H19	0.018-0.100mm	2200	-	-
8011 8011A 8079	0	0.006-0.009mm	50-100	-	>0.5%
		> 0.009-0.025mm	55-100	-	> 1%
		>0.025-0.040mm	55-110	-	>4%
		> 0.040-0.090mm	60-120	-	>4%
		> 0.090-0.140mm	60-120	> 13%	-
		> 0.140-0.200mm	60-120	> 15%	-
	H22	0.035-0.090mm	90-150	-	>1-2%
		> 0.090-0.200mm	90-150	> 5%-6%	
	H24	0.035-0.090mm	120-170	> 2%-3%	
		> 0.090-0.200mm	120-170	> 4%-5%	
	H26	0.035-0.200mm	140-190	> 1%-2%	
	H18	0.035-0.200mm	2160	-	-
	H19	0.035-0.200mm	>170	-	-

NOTE/ Based on GB/IT 3198

MECHANICAL PROPERTIES

For Sheet and Plate
General Use

Alloy	Temper	Specified Thickness (mm)	Tensile Strength (MP)						Yield Strength (uPa)			Elongation % (A5omm/A)		
			GB/T 3880		ASTM B209		EN 485		GBIT 3880	ASTM 8209	EN 485	GB/T 3880	ASTM B209	EN 485
			Min	Max	Min	Max	Min	Max						
1050	0	0.2~			-	-	-	-	-	-	-	> 15-20%	-	-
		>0.8-12.5	60	100	-	-	-	-	>20	-	-	> 25-30%	-	-
	H14, H24	0.2-0.8	95	130	-	-	-	-	-	-	-	>1-3%	-	-
		>0.8-6.0	95	130	-	-	-	-	>75	-	-	> 4-6%	-	-
	H18	0.2-3.0	130		-	-	-	-	-	-	-	> 1-4%	-	-
1050A	0	0.2-12.5	65	95	-	-	65	95	> 20	-	2 0	20-35%	-	> 20-35%
	H14	0.2-6.0	105	145	-	-	105	145	>85	-	>85	> 2-5%	-	> 2-5%
	H24	0.2-6.0	105	145	-	-	105	145	>75	-	>75	> 3-8%		> 3-8%
	H18	0.2-0.5	140		-	-	135		> 120	-	>120	>1%	-	>1%
		>0.5-3.0	140		-	-	140		> 120	-	• 120	> 2%	-	2 %
1060	0	0.2-80	60	100	55	95	-	-	> 15	> 15	-	» 15-25%	> 15-25%	-
	H14, H24	0.2-6.0	95	135	85	120	-	-	>70	>70	-	> 1-10%	> 1%-10%	-
	H18	0.2-3.0	125		110		-	-	>85	>85	-	> 1-4%	>1-4%	-
1100	0	0.2-80	75	105	75	105	-	-	2 5	2 5	-	> 15-30%	> 15-30%	-
	H14, H24	*0.2-4.0*	110	145	110	145	-	-	>95	>95	-	>1-5%	> 1%-5%	-
	H18	0.2-3.0	150		150		-	-	-	-	-	>1-4%	>1-4%	-
3003	0	0.2-12.5	95	140	95	130	95	135	> 35	> 35	> 35	>15-24%	> 14-25%	> 15-24%
	H12	0.2-6.0	120	160	120	160	120	160	>90	>85	>90	> 3-6%	> 3-6%	> 3-6%
	H22	0.2-6.0	120	160	120	160	120	160	> 80	>85	> 80	>6-9%	> 3-6%	> 6-9%
	H14	0.2-6.0	145	195	140	180	145	185	> 125	> 115	> 125	> 2-4%	> 1~5%	>2-4%
	H24	0.2-6.0	145	195	140	180	145	185	>115	> 115	> 115	>4-6%	> 1-5%	> 4-6%
3004	O, H111	0.2-12.5	155	200	150	200	155	200	>60	>60	>60	> 13-16%	> 9-18%	> 13-16%
	H22, H32	0.2-6.0	190	240	190	240	190	240	> 145	> 145	> 145	>4-7%	> 1-5%	>4-7%
	H24, H34	0.2-3.0	220	265	220	265	220	265	> 170	> 170	> 170	> 3-4%	>1-4%	> 3-4%
3005	O, H111	0.2-6.0	115	165	115	165	115	165	>45	>45	>45	> 12-19%	> 10-20%	> 12-19%
	H14	0.2-6.0	170	215	165	215	170	215	> 150	> 145	> 150	>1-3%	> 1-3%	> 1-3%
	H24	0.2-3.0	170	215	-	-	170	215	> 130	-	> 130	>4%	-	> 4%
3105	O, H111	0.32-2.0	100	155	95	145	100	155	>40	> 35	>40	> 14-17%	> 16-20%	> 14-17%
	H14	0.32-2.0	150	200	150	200	150	200	> 130	> 125	> 130	>2%	>1-2%	>2%
	H24	0.32-2.0	150	200	150		150	200	> 120	> 125	> 120	>4-5%	> 2-6%	4 - 5 %
5005	O, H111	0.2-12.5	100	145	105	145	100	145	> 35	> 35	> 35	> 15-	> 12-22%	> 15-24%
	H22, H32	0.5-6.0	125	165	120	160	125	165	>80	> 85	> 80	24%	> 3-7%	> 5-8%
	H24, H34	0.5-6.0	145	185	140	180	145	185	> 110	> 105	> 110	> 5-8%	> 3%-5%	> 4-6%
	H112	6.3-12.5	115		115		-	-	-	-	-	>4-6%	> 8%	-
		> 12.5-40	105		105		-	-	-	-	-	> 8%	> 10% (A)	-
5052	O, H111	0.2-6.0	170	215	170	215	170	215	> 65	> 65	> 65	> 10% (A)	>13-19%	> 12-18%
	H22, H32	0.2-6.0	210	260	215	265	210	260	> 130	> 160	> 130	> 12-19%	>4-7%	> 5-10%
	H24, H34	0.2-6.0	230	280	235	285	230	280	> 150	> 180	> 150	> 5-10%	> 3-6%	»4-7%
	H112	6.3-12.5	190		190		-	-	> 80	> 110	-	>4-7%	> 7%	-
		> 12.5-40	170		170		-	-	> 70	> 65	-	> 7%	> 10% (A)	-

> 10% (A)

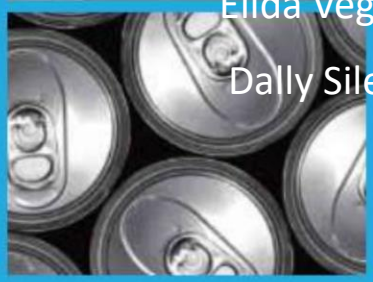
Alloy	Temper	Specified Thickness (mm)	Tensile Strength(wra)						Yield Strength @MPa			Elongation % (A50m m /A)		
			GB/T 3880		ASTM B209		EN 485		GB/T 3880	ASTM B209	EN 485	GB/T 3880	ASTM B209	EN 485
			Min	Max	Min	Max	Min	Max						
5754	0	0.75-3.5	-	-	200	270	190	190	-	> 80	>80	-	> 17-19%	> 12-18%
	0, H111	0.2-12.5	-	-	-	-	190	240	-	-	> 80	-	-	> 12-18%
	H22, H32	0.2-12.5	-	-	-	-	220	270	-	-	> 130	-	-	>7-11%
	H24, H34	0.2-12.5	-	-	-	-	240	280	-	-	> 160	-	-	>6-10%
	H112	6.0-12.5	-	-	-	-	190		-	-	> 100	-	-	> 12%
		> 12.5-25	-	-	-	-	190		-	-	> 90	-	-	> 10% 0)
		> 25.0-40	-	-	-	-	190		-	-	> 80	-	-	> 12%0A)
5083	0, H111	1.25-6.3	275	350	275	350	275	350	• 125	125-200	> 125	>12-15%	> 16%	>12-15%
		>6.3-12.5	275	350	270	345	270	345	> 125	115-200	> 115	> 16%	> 16%	> 16%
		=-H 2.5~40	275	350	270	345	270	345	> 125	115-200	> 115	> 15%04)	> 16%	> 15%0)
	H22, H32	0.2-3.2	305	380	-	-	305	380	> 215	-	> 215	> 5-8%	-	> 5-8%
		> 3.2-6.0	305	380	305	385	305	380	> 215	> 215	> 215	>8%	> 10-12%	> 8%
	H24, H34	0.2-6.0	340	400	-	-	340	400	> 250	-	> 250	>4-7%	-	> 4-7%
	H112	6.3-12.5	275		275		275		125	> 125	>125	> 12%	> 12%	> 12%
		> 12.5-40	275		275		275		125	> 125	> 125	> 10%0A)	> 10%(A)	> 10%0)
2014	T451	6.3-12.5	400		400		400		> 250	> 250	> 250	> 14%	> 14%	> 14%
		>12.5-25	400		400		400		> 250	> 250	> 250	> 12%0)	> 12%08)	> 12%0A
		> 25-50	400		400		400		250	> 250	> 250	> 10% 0)	> 10%0A)	>7-10%0)
		> 50.0-80	395		395		395		> 250	> 250	> 250	>7%0A)	>7%0A)	>7%0A)
2017	T451	6.3-12.5	355		-	-	-	-	> 195	-	-	> 12%	-	-
		> 12.5-50	355		-	-	-	-	> 195	-	-	> 12% (A)	-	-
2024	T351	6.3-12.5	440		440		440		> 290	> 290	> 290	> 12%	>12%	> 13%
		> 12.5-25	435		435		430		• 290	> 290	290	> 7%0)	7%0A	> 11%0A)
		> 25-40	425		425		430		> 290	> 290	> 290	>6%0A)	>6%08)	> 11% 0)
6061	T4, T451	0.5-12.5	205		205		205		> 110	> 110	> 110	> 12-18%	> 16-18%	> 12-18%
		>12.5-80	205		205		205		> 110	> 110	> 110	> 14-16%04)	>14-16%08)	> 14-15%0A)
	T6, T651	0.5-12.5	290		290		290		> 240	> 240	> 240	> 6-10%	> 10%	> 6-10%
		>12.5-100	290		290		290		> 240	> 240	> 240	> 5-8%04)	> 5-8%(A)	> 5-8% 0A)
6082	T4, T451	0.4-12.5	205		-	-	205		> 110	-	> 110	> 12-15%	-	>12-15%
		>12.5-80	205		-	-	205		> 110	-	> 110	>12-13%0)	-	> 12-13%08)
	T6	0.4-6.0	310		-	-	310		260	-	> 260	• 6-10%	-	> 6-10%
	T651	6.0-12.5	300		-	-	300		> 255	-	> 255	> 9%	-	> 9%
		>12.5-100	295		-	-	295		> 240	-	> 240	>7-8%0)	-	>7-8%08)
7075	T651	6.3-12.5	540		540		540		> 460	> 460	> 460	> 9%	> 9%	> 8%
		> 12.5-25	540		540		540		> 470	> 470	> 470	> 6%(A)	> 6% 0A)	> 6% (A)
		> 25.0-50	530		530		530		> 460	> 460	> 460	> 5% (A)	> 5% (A)	> 5% 04)
		> 50.0-60	525		525		525		> 440	> 440	> 440	> 4%(A)	>4% (A)	> 4%0A)
		> 60.0-80	495		495		495		> 420	> 420	> 420	>4% (A)	>4% 0)	> 4% (A)

NOTE/ The A value for elongation is the elongation measured over a gauge length of 5.65 VSO(where SO0 is the initial cross-sectional area of the test piece), and expressed in percent









- Immediate processing of your requests
- Fast Dispatch
- Constant quality control of our products

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Exportador más grande de Asia para América Latina