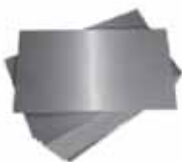


# ALUMINUM FLAT ROLLED

Product



 **YIEH CORP.**

Aluminum Sheet and Plate

Aluminum Strip and Coil

Aluminum Foil

Aluminum Tread or Embossed Sheet

Aluminum Disc

Coated Aluminum Sheet and Coil

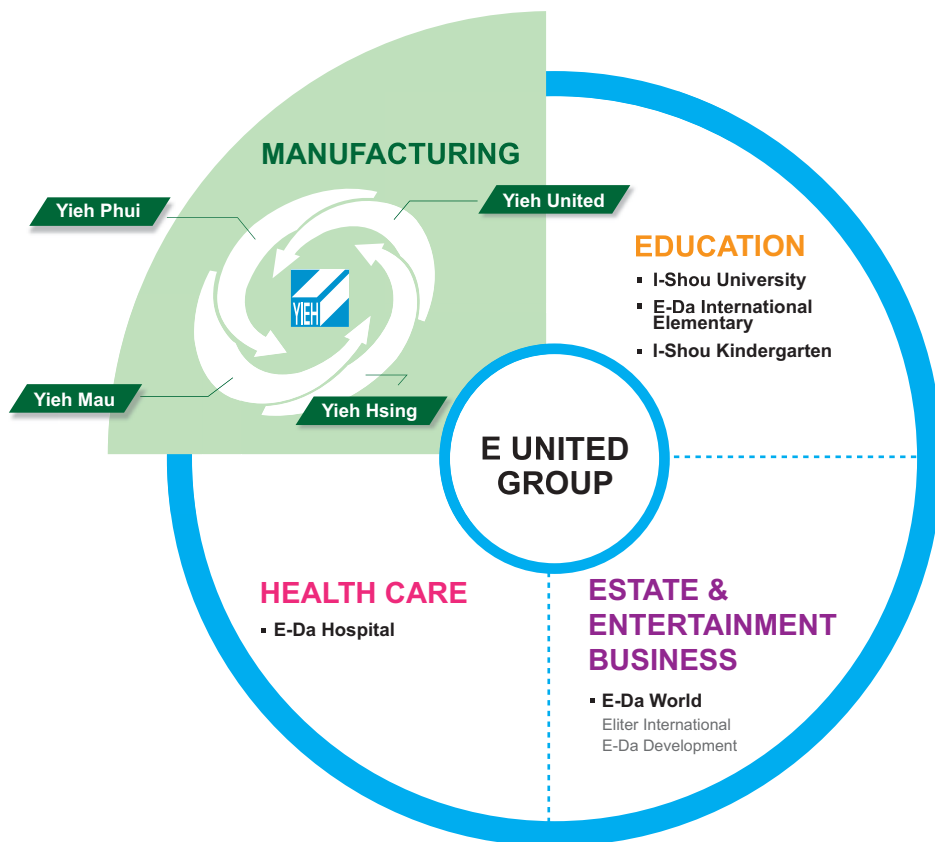
A large, stylized world map composed of a grid of small white dots, spanning the width of the lower half of the page.

**PROFESSIONAL**  
**RELIABLE**  
**EFFICIENT**

- ▶ [www.yieh.com](http://www.yieh.com)
- ▶ [www.aluminum.yieh.com](http://www.aluminum.yieh.com)



**YIEH CORP.**  
燁興國際股份有限公司



## ABOUT YIEH CORP.

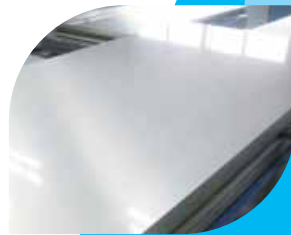
Yieh Corp. belongs to E United Group, which is the largest private metal making group in Taiwan, accumulated more than 35 years of experience in metal industry.

As one of most important sales outlet of E United Group, Yieh Corp. successfully integrates internal and external metal resource in Taiwan and Chinese mainland to provide total solution for client's various needs.

Hereby we recommend one of our most popular metal products, aluminum flat rolled product. We not only provide sheet, plate, coil, strip, foil and disc with quality assurance, but also optimize complete supply chain to facilitate customer time saving and cost effectiveness.

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

BEAUTIFUL

LIGHT

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

The products from Yieh Corp. 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                                                     |
| YS/T 431  | Aluminum and Aluminum Alloys Coil Coated Sheet and Strip                              |

### EUROPEAN STANDARD

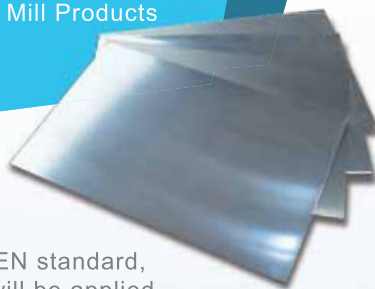
|        |                                                                                |
|--------|--------------------------------------------------------------------------------|
| EN 573 | Aluminum and Aluminum Alloys Chemical Composition and Form of Wrought Products |
| EN 485 | Aluminum and Aluminum 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 |
| ANSI 35.1 | 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            |                   | EN AW-1050A       |
|              | 1060             | 1060              |                   |
|              | 1100             | 1100              |                   |
|              | 1200             |                   | EN AW-1200        |
|              | 1145             | 1145              |                   |
|              | 1235             | 1235              | EN AW-1235        |
| 2xxx Series  | 2014             | 2014              | EN AW-2014        |
|              | 2017             |                   |                   |
|              |                  |                   | EN AW-2017A       |
|              | 2024             | 2024              | EN AW-2024        |
| 3xxx Series  | 3003             | 3003              | EN AW-3003        |
|              | 3004             | 3004              | EN AW-3004        |
|              | 3005             | 3005              | EN AW-3005        |
|              | 3105             | 3105              | EN AW-3105        |
| 5xxx Series  | 5005             | 5005              | EN AW-5005        |
|              | 5052             | 5052              | EN AW-5052        |
|              |                  | 5754              | EN AW-5754        |
|              | 5083             | 5083              | EN AW-5083        |
| 6xxx Series  | 6061             | 6061              | EN AW-6061        |
|              | 6082             |                   | EN AW-6082        |
| 7xxx Series  | 7075             | 7075              | EN AW-7075        |
| 8xxx Series  | 8011             |                   |                   |
|              | 8011A            |                   | EN AW-8011A       |
|              | 8079             |                   | EN AW-8079        |

# TEMPER DESIGNATIONS

| Temper                          | Definition                                                                                                                                                                                                |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| F                               | As fabricated (no mechanical property limits specified)                                                                                                                                                   |
| O                               | Annealed                                                                                                                                                                                                  |
| H12<br>H14<br>H16<br>H18<br>H19 | Stain Hardened, 1/4 Hard<br>Stain Hardened, 1/2 Hard<br>Stain Hardened, 3/4 Hard<br>Stain Hardened, Full Hard<br>Stain Hardened, Extra Hard                                                               |
| H111<br>H112                    | Annealed and slightly strain hardened (less than H11)<br>Slightly strain harden from working at an elevated temperature or from limited amount of cold work                                               |
| H116                            | Applies to alloys in the 5xxx series with a magnesium content of 3% or more, slightly strain harden at last operation, exfoliation and intergranular corrosion resistance are specified.                  |
| H22<br>H24<br>H26<br>H28        | Stain Hardened and Partially Annealed, 1/4 Hard<br>Stain Hardened and Partially Annealed, 1/2 Hard<br>Stain Hardened and Partially Annealed, 3/4 Hard<br>Stain Hardened and Partially Annealed, Full Hard |
| H32<br>H34<br>H36<br>H38        | Stain Hardened and stabilized, 1/4 Hard<br>Stain Hardened and stabilized, 1/2 Hard<br>Stain Hardened and stabilized, 3/4 Hard<br>Stain Hardened and stabilized, Full Hard                                 |
| H321                            | Applies to alloys in the 5xxx series with a magnesium content of 3% or more, strain hardened and stabilized at last operation, exfoliation and intergranular corrosion resistance are specified.          |
| H42                             | Stain Hardened and painted or lacquered, 1/4 Hard                                                                                                                                                         |
| H44                             | Stain Hardened and painted or lacquered, 1/2 Hard                                                                                                                                                         |
| H46                             | Stain Hardened and painted or lacquered, 3/4 Hard                                                                                                                                                         |
| H48                             | Stain Hardened and painted or lacquered, Full Hard                                                                                                                                                        |
| T351                            | Solution heat-treated, cold worked, stress relived by stretching, and naturally aged                                                                                                                      |
| T4<br>T451                      | Solution heat-treated and naturally aged<br>Solution heat-treated , stress relived by stretching, and naturally aged                                                                                      |
| T6<br>T651                      | Solution heat-treated and then artificially aged<br>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 | O, H112, H12, H14, H16, H18, H22, H24, H26            |
| 3xxx: 3003, 3004, 3005, 3105  |                                                       |
| 5xxx: 5005, 5052, 5754, 5083  | O, 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,<br>6.0 ~ 120mm for plate |
| Width:     | 900 ~ 2,200mm                                   |
| Length:    | 2,000 ~ 10,000mm                                |



## > STANDARD WIDTH AND LENGTH

1000x2000mm, 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<br>1145, 1235, 1200 | O, H14, H16, H18, H19, H22, H24, H26 |
| 3xxx: 3003                                        |                                      |
| 8xxx: 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 O<br>H194 fabricated from Temper H18<br>★ Temper H12, H14, H22, H24, H32 and H34, which are applied to base material, are provided as per client's request and mutually agreed |
| 3xxx: 3003, 3105       |               |                                                                                                                                                                                                            |
| 5xxx: 5052, 5754       | O, H114       |                                                                                                                                                                                                            |

## > 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 PATTERN

| 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<br>0.5~1.5mm for sheet |
| Width:     | 1,000~1,500mm                             |
| Length:    | Coiled, or 2,000~4,000mm                  |

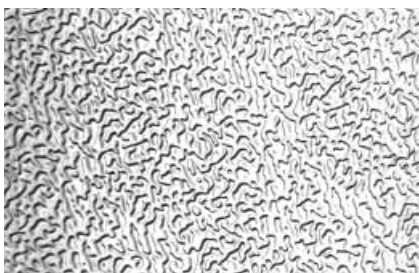
## > THE EMBOSSED PATTERN SHALL BE USUALLY CONFIRMED BY CUSTOMER WHEN PLACING ORDER



#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                   | O, H12, H14, H22, H24 |
| 5xxx: 5052                   | O, H22, H24, H32, H34 |
| 6xxx: 6061                   | O, 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

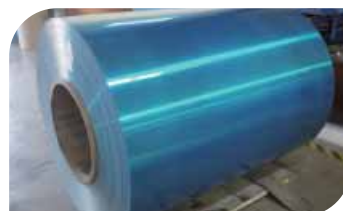
Based material conforms to GB/T 3880

## Alloy and Temper :

| Alloy            | Temper             | Remarks                                                                                                                         |
|------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------|
| 1xxx: 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)<br>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           | +/- 0.02mm      | +/- 0.03mm   | +/- 0.03mm   | -            |
| >0.4~0.6mm          | +/- 0.03mm      | +/- 0.04mm   | +/- 0.04mm   | +/- 0.04mm   |
| >0.6~0.8mm          | +/- 0.03mm      | +/- 0.05mm   | +/- 0.05mm   | +/- 0.07mm   |
| >0.8~1.0mm          | +/- 0.04mm      | +/- 0.06mm   | +/- 0.07mm   | +/- 0.08mm   |
| >1.0~1.2mm          | +/- 0.04mm      | +/- 0.07mm   | +/- 0.07mm   | +/- 0.09mm   |
| >1.2~1.5mm          | +/- 0.05mm      | +/- 0.08mm   | +/- 0.08mm   | +/- 0.11mm   |
| >1.5~2.0mm          | +/- 0.06mm      | +/- 0.09mm   | +/- 0.09mm   | +/- 0.12mm   |
| >2.0~3.0mm          | +/- 0.07mm      | +/- 0.09mm   | +/- 0.09mm   | +/- 0.15mm   |
| >3.0~4.0mm          | +/- 0.10mm      | +/- 0.15mm   | +/- 0.16mm   | +/- 0.18mm   |
| >4.0~6.0mm          | +/- 0.18mm      | +/- 0.22mm   | +/- 0.22mm   | +/- 0.25mm   |
| >6.0~8.0mm          | +/- 0.24mm      | +/- 0.28mm   | +/- 0.28mm   | +/- 0.30mm   |

## ▼ Thickness Tolerances for Hot Rolled Plate

| Specified Thickness | Specified Width |              |              |
|---------------------|-----------------|--------------|--------------|
|                     | >1000~1250mm    | >1250~1600mm | >1600~2000mm |
| 6.0~8.0mm           | +/- 0.35mm      | +/- 0.40mm   | +/- 0.40mm   |
| >8.0~10.0mm         | +/- 0.45mm      | +/- 0.50mm   | +/- 0.50mm   |
| >10.0~15.0mm        | +/- 0.50mm      | +/- 0.60mm   | +/- 0.65mm   |
| >15.0~20.0mm        | +/- 0.60mm      | +/- 0.70mm   | +/- 0.75mm   |
| >20.0~30.0mm        | +/- 0.65mm      | +/- 0.75mm   | +/- 0.85mm   |
| >30.0~40.0mm        | +/- 0.75mm      | +/- 0.85mm   | +/- 1.00mm   |
| >40.0~50.0mm        | +/- 0.90mm      | +/- 1.00mm   | +/- 1.10mm   |
| >50.0~60.0mm        | +/- 1.10mm      | +/- 1.20mm   | +/- 1.40mm   |
| >60.0~80.0mm        | +/- 1.40mm      | +/- 1.50mm   | +/- 1.70mm   |
| >80.0~100.0mm       | +/- 1.70mm      | +/- 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         | +/- 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 |
| 0.006~0.200mm       | +/- 1.0mm       | +/- 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 %<br>(for a chord of at least 300mm)<br>dmax/l |
|---------------------|---------------------|--------------------|------------------------------------------------------------------|
|                     | On Length<br>dmax/L | On Width<br>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 <sup>3</sup> ) | Alloy | Density (kg/m <sup>3</sup> ) | Alloy | Density (kg/m <sup>3</sup> ) | Alloy | Density (kg/m <sup>3</sup> ) |
|-------------|------------------------------|-------|------------------------------|-------|------------------------------|-------|------------------------------|
| 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                        | 8011A | 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)

**Formula** Theoretical Weight of Pcs = Thickness x Width 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  |
| 1.0 x 1250 x 2500mm                               | 8.438 kgs  |
| 1.0 x 1500 x 3000mm                               | 12.150 kgs |
| 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 <sup>3</sup> |            |

## ► Disc

**Formula**

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

**For Example**

Alloy 1050, Thickness 3.0mm x Diameter 500mm

Weight/pcs = 3.0 x 10<sup>-3</sup> x 3.14 x (0.5/2)<sup>2</sup> 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<br>mm      | Pallet Weight<br>Kg | Estimated PCS<br>for Thickness<br>1.0mm only | Estimated Pallet Height<br>for any<br>thickness | Standard Size<br>mm        | Coil Weight<br>Kg | Estimated Coil OD<br>for any<br>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                                           | 1219 x C                   | 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<sup>3</sup>

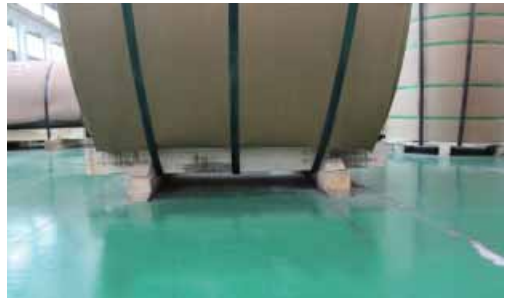


# STANDARD EXPORT PACKAGING

## EYE TO SIDE

Coil Weight / 2.0~6.0MT

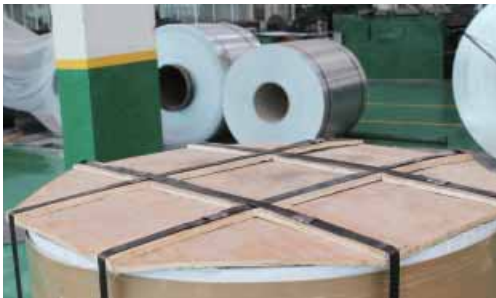
To be recommended when the coil width is less than 1200mm to maximize container loading



## 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



## WOODEN PALLET

Pallet Weight/ 1.0~3.0MT

Pallet weight of 2.0 to 2.5MT is recommended to maximize container loading



## LABEL AND SHIPPING MARK

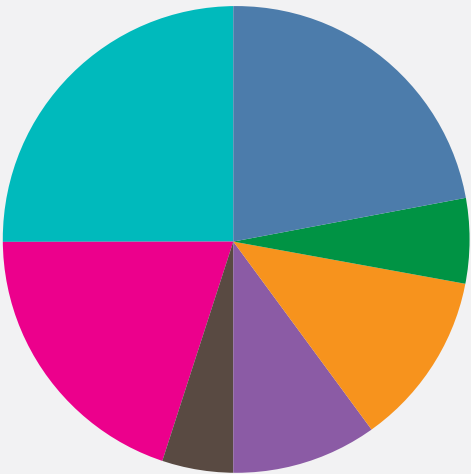
|                                                                                                                       |  |                         |  |                                                                                                                                                                                                   |                        |
|-----------------------------------------------------------------------------------------------------------------------|--|-------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
|  <b>YIEH CORP.</b><br>WWW.YIEH.COM |  |                         |  | <b>YIEH CORPORATION LIMITED</b><br>STTWYY1802TC8<br>LOS ANGELES<br>MADE IN CHINA<br>NO. 17<br> <b>YIEH.COM</b> |                        |
| <b>PRODUCT</b>                                                                                                        |  | Aluminum Sheet          |  |                                                                                                                                                                                                   |                        |
| <b>STD /GR /FINISH</b>                                                                                                |  | GB/T 3880 3003 H14      |  |                                                                                                                                                                                                   |                        |
| <b>PRODUCT NO.</b>                                                                                                    |  | A998817                 |  |                                                                                                                                                                                                   |                        |
| <b>SIZE</b>                                                                                                           |  | 2.0mm X 1219mm X 2438mm |  |                                                                                                                                                                                                   |                        |
| <b>N.W</b>                                                                                                            |  | 2170 KGS                |  |                                                                                                                                                                                                   |                        |
| <b>G.W</b>                                                                                                            |  | 2250 KGS                |  | <b>REMARKS</b>                                                                                                                                                                                    | Customer Ref. No: 9901 |

# 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, Ceiling  
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  
Medical Equipment



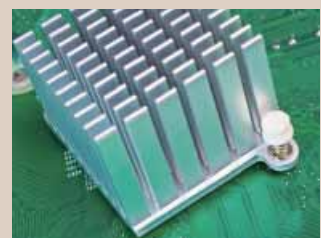
## DURABLE GOODS

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



## OTHERS

Furniture, Partition  
Hardware, Accessories  
Sport Goods  
PS plate



# ISO CERTIFICATION

- ✓ Reliable Quality Control
- ✓ Professional Services
- ✓ Efficient Order Management



# CE CERTIFICATION

- ✓ An Important Passport to European Market
- ✓ Environmental Material Assurance

# ORDERING INFORMATION

## ► Required Information in firm enquiry

| Item                                      | Information                                                           | Example                              |
|-------------------------------------------|-----------------------------------------------------------------------|--------------------------------------|
| 1.Product Name*                           | Aluminum Sheet, Aluminum Foil                                         | Aluminum Sheet                       |
| 2.Standard Specification*                 | GB/T3880, ASTM B209, EN 485                                           | GB/T 3880                            |
| 3.Alloy*                                  | 1050, 1050A,3003,5052, 6061                                           | 1050                                 |
| 4.Temper*                                 | H14, H24, H32, T6, T651                                               | H14                                  |
| 5.Dimension*                              | Thickness x Width x Length                                            | 0.5 x 1219 x 2438mm                  |
| 6.Order Quantity*                         | Specific Quantity per each size                                       | 20MT                                 |
| 7.Surface Finish<br>(if any)              | Bright Finish, Mill Finish<br>Coating (paint, color, thickness)       | Mill Finish                          |
| 8.Surface Protection<br>(if any)          | Paper interleaved, PE coating<br>on main side                         | With Paper Interleaved               |
| 9.Coil ID (if specified)                  | 405mm, 505mm                                                          | N/A                                  |
| 10.Coil / Pallet Weight<br>(if specified) | 3.0~5.0MT/coil, 1.5~2.5MT/pallet                                      | 2.0MT/pallet Max.                    |
| 11.Application                            | Catering Equipment, Curtain Wall                                      | Catering Equipment                   |
| 12.Other Requirements<br>(if any)         | Chemical Composition, Mechanical<br>Properties, Dimensional Tolerance | Thickness tolerance<br>on light side |

- ✓ The items with red star are required to be clarified for any enquiry.
- ✓ Other specifications unlisted in our catalogue are available up to request, or will be provided by agreement.

## ► Minimum Order Quantity (MOQ)

5MT per size for popular items

7MT to 10MT per size for special dimensions

2MT per size for disc

## NOTE /

The order with quantity less than MOQ may be acceptable on condition of that other clients order same specifications at the time of ordering

# 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  | 0.50         | 0.50    | 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  | 0.30         | 0.70    | 0.20      | 0.20    | 0.5~1.1 | 0.1       | 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  | 0.40         | 0.40    | 0.10      | 0.50    | 2.6~3.6 | 0.30      | 0.20    | 0.15 | 0.05   | 0.15  | remainder |
| 5083  | 0.40         | 0.40    | 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    | 0.8~1.2 | 0.04-0.35 | 0.25    | 0.15 | 0.05   | 0.15  | remainder |
| 6082  | 0.7~1.3      | 0.50    | 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    | 1.2~2.0   | 0.30    | 2.1~2.9 | 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 PROPERTIES

## For Foil General Use

| Alloy                                        | Temper   | Specified Thickness | Tensile Strength MPa | Elongation, % |         |
|----------------------------------------------|----------|---------------------|----------------------|---------------|---------|
|                                              |          |                     |                      | A50mm         | A100mm  |
| 1050<br>1060<br>1100<br>1145<br>1200<br>1235 | O        | 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      | 0.006~0.200mm       | ≥140                 | -             | -       |
|                                              | H19      | 0.006~0.200mm       | ≥150                 | -             | -       |
| 3003                                         | O        | 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       | ≥180                 | -             | -       |
|                                              | H26      | 0.100~0.200mm       | ≥180                 | > 1%          | -       |
|                                              | H18      | 0.010~0.200mm       | ≥190                 | > 1%          | -       |
|                                              | H19      | 0.018~0.100mm       | ≥200                 | -             | -       |
| 8011<br>8011A<br>8079                        | O        | 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       | ≥160                 | -             | -       |
|                                              | H19      | 0.035~0.200mm       | ≥170                 | -             | -       |

**NOTE /** Based on GB/T 3198

MECHANICAL  
PROPERTIES

For Sheet and Plate  
General Use

| Alloy | Temper   | Specified Thickness<br>(mm) | Tensile Strength (MPa) |     |           |     |        |     | Yield Strength (MPa) |           |        | Elongation % (A50mm / 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 |                      |           |        |                          |           |          |
| 1050  | O        | 0.2~0.8                     | 60                     | 100 | -         | -   | -      | -   | -                    | -         | -      | > 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 | O        | 0.2~12.5                    | 65                     | 95  | -         | -   | 65     | 95  | > 20                 | -         | > 20   | > 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  | O        | 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  | O        | 0.2~80                      | 75                     | 105 | 75        | 105 | -      | -   | > 25                 | > 25      | -      | > 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  | O        | 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   | > 15~24%                 | > 12~22%  | > 15~24% |
|       | H22, H32 | 0.5~6.0                     | 125                    | 165 | 120       | 160 | 125    | 165 | > 80                 | > 85      | > 80   | > 5~8%                   | > 3~7%    | > 5~8%   |
|       | H24, H34 | 0.5~6.0                     | 145                    | 185 | 140       | 180 | 145    | 185 | > 110                | > 105     | > 110  | > 4~6%                   | > 3%~5%   | > 4~6%   |
|       | H112     | 6.3~12.5                    | 115                    |     | 115       |     | -      | -   | -                    | -         | -      | > 8%                     | > 8%      | -        |
|       |          | > 12.5~40                   | 105                    |     | 105       |     | -      | -   | -                    | -         | -      | > 10% (A)                | > 10% (A) | -        |
| 5052  | O, H111  | 0.2~6.0                     | 170                    | 215 | 170       | 215 | 170    | 215 | > 65                 | > 65      | > 65   | > 12~19%                 | > 13~19%  | > 12~18% |
|       | H22, H32 | 0.2~6.0                     | 210                    | 260 | 215       | 265 | 210    | 260 | > 130                | > 160     | > 130  | > 5~10%                  | > 4~7%    | > 5~10%  |
|       | H24, H34 | 0.2~6.0                     | 230                    | 280 | 235       | 285 | 230    | 280 | > 150                | > 180     | > 150  | > 4~7%                   | > 3~6%    | > 4~7%   |
|       | H112     | 6.3~12.5                    | 190                    |     | 190       |     | -      | -   | > 80                 | > 110     | -      | > 7%                     | > 7%      | -        |
|       |          | > 12.5~40                   | 170                    |     | 170       |     | -      | -   | > 70                 | > 65      | -      | > 10% (A)                | > 10% (A) | -        |

| Alloy | Temper   | Specified Thickness (mm) | Tensile Strength (MPa) |     |           |     |        |     | Yield Strength (MPa) |           |        | Elongation % (A50mm / 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  | O        | 0.75~3.5                 | -                      | -   | 200       | 270 | 190    | 190 | -                    | > 80      | > 80   | -                        | > 17~19%     | > 12~18%     |
|       | O, 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% (A)    |
|       |          | > 25.0~40                | -                      | -   | -         | -   | 190    |     | -                    | -         | > 80   | -                        | -            | > 12% (A)    |
| 5083  | O, 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%        |
|       |          | > 12.5~40                | 275                    | 350 | 270       | 345 | 270    | 345 | > 125                | 115~200   | > 115  | > 15% (A)                | > 16%        | > 15% (A)    |
|       | 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% (A)                | > 10% (A)    | > 10% (A)    |
| 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% (A)                | > 12% (A)    | > 12% (A)    |
|       |          | > 25~50                  | 400                    |     | 400       |     | 400    |     | > 250                | > 250     | > 250  | > 10% (A)                | > 10% (A)    | > 7~10% (A)  |
|       |          | > 50.0~80                | 395                    |     | 395       |     | 395    |     | > 250                | > 250     | > 250  | > 7% (A)                 | > 7% (A)     | > 7% (A)     |
| 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% (A)                 | 7% (A)       | > 11% (A)    |
|       |          | > 25~40                  | 425                    |     | 425       |     | 430    |     | > 290                | > 290     | > 290  | > 6% (A)                 | > 6% (A)     | > 11% (A)    |
| 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% (A)             | > 14~16% (A) | > 14~15% (A) |
|       | 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% (A)               | > 5~8% (A)   | > 5~8% (A)   |
| 6082  | T4, T451 | 0.4~12.5                 | 205                    |     | -         | -   | 205    |     | > 110                | -         | > 110  | > 12~15%                 | -            | > 12~15%     |
|       |          | > 12.5~80                | 205                    |     | -         | -   | 205    |     | > 110                | -         | > 110  | > 12~13% (A)             | -            | > 12~13% (A) |
|       | 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% (A)               | -            | > 7~8% (A)   |
| 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% (A)     | > 6% (A)     |
|       |          | > 25.0~50                | 530                    |     | 530       |     | 530    |     | > 460                | > 460     | > 460  | > 5% (A)                 | > 5% (A)     | > 5% (A)     |
|       |          | > 50.0~60                | 525                    |     | 525       |     | 525    |     | > 440                | > 440     | > 440  | > 4% (A)                 | > 4% (A)     | > 4% (A)     |
|       |          | > 60.0~80                | 495                    |     | 495       |     | 495    |     | > 420                | > 420     | > 420  | > 4% (A)                 | > 4% (A)     | > 4% (A)     |

**NOTE /** The A value for elongation is the elongation measured over a gauge length of 5.65  $\sqrt{S_0}$ (where  $S_0$  is the initial cross-sectional area of the test piece), and expressed in percent