

# ALHIGHCE™-83

5083 boasts the highest strength even among non-heat-treatable alloys, and is a 5000-series aluminum alloy with exceptional corrosion resistance properties and weldability.

**ALHIGHCE™-83** is a 5083 super high precision aluminum alloy plate designed to meet customer needs for reduced residual stress, improved surface quality, and superior accuracy of thickness and surface flatness.

**ALHIGHCE™-83** helps to reduce customers' costs.

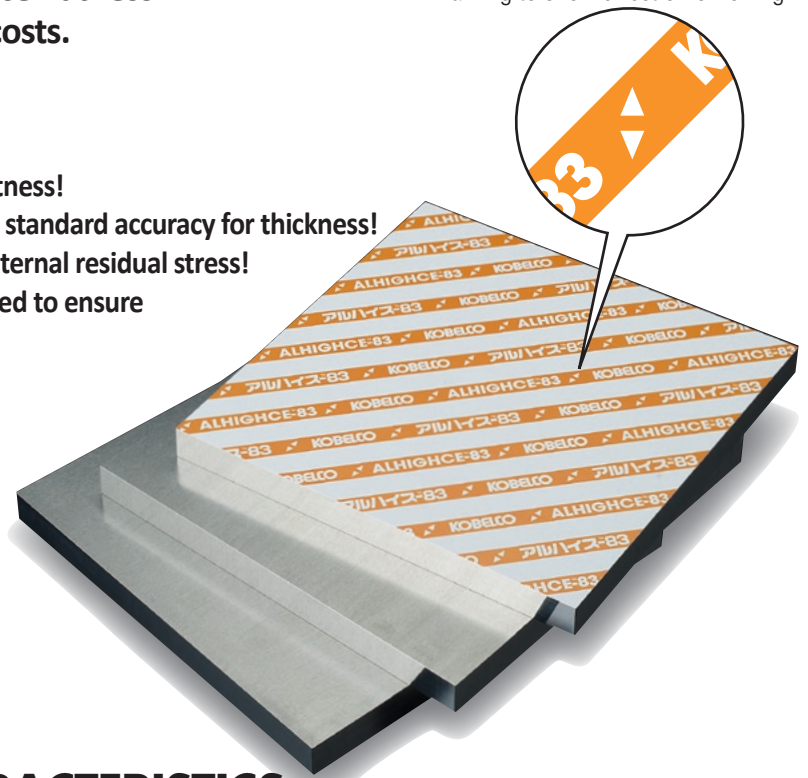
Marking to show direction of rolling

## FEATURES

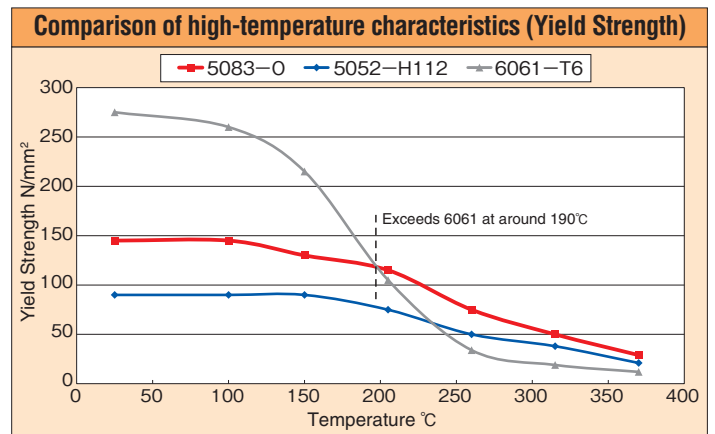
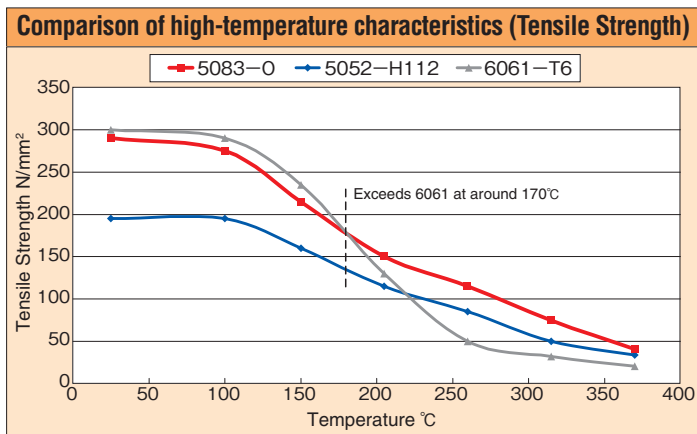
- ▶ Improved manufacturing processes offer increased flatness!
- ▶ A superior rolling technology offers approx. 1/5 the JIS standard accuracy for thickness!
- ▶ A distinctive heat treatment process greatly reduces internal residual stress!
- ▶ The surface of each individual plate is carefully inspected to ensure a high quality surface on both sides!

## APPLICATIONS

Structural materials, Semiconductor manufacturing equipment, LCD manufacturing equipment, Solar panel manufacturing equipment, Robots, Medical equipment, OA equipment, Optical equipment, Various molds, Tools, etc.



## HIGH-TEMPERATURE CHARACTERISTICS



**QUALITY/REFINING/COMPOSITION****A5083P-O**

(Unit: Wt%)

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al
≤0.40	≤0.40	≤0.10	0.40-1.0	4.0-4.9	0.05-0.25	≤0.25	≤0.15	Remainder

**THICKNESS ACCURACY**

(Unit: mm)

Thickness	4≤-≤6	6<-≤12	12<-≤15	15<-≤20	20<-≤30
<b>ALHIGHCE™-83</b> Tolerance	±0.06	±0.09	±0.12	±0.15	±0.20

## Reference

Thickness	4	5	6	6<-≤8	8<-≤11	12	12<-≤16	16<-≤20	20<-≤22	22<-≤29	30	30<-≤35	35<-≤40	40<-≤50
<b>ALJADE™83</b>	±0.08	±0.10	±0.12	±0.16		±0.30		±0.40		±0.50				
JIS Tolerance	±0.35	±0.45	±0.50	±0.60	±0.70		±0.80		±0.90	±1.0	±1.1	±1.3		

**SURFACE FLATNESS****ALHIGHCE™-83** Thickness 4-30mm 0.4mm or less/M**MECHANICAL PROPERTIES (TYPICAL VALUES)**

Thickness (mm)	Tensile Strength (N/mm <sup>2</sup> )	Yield Strength (N/mm <sup>2</sup> )	Elongation (%)
4≤-≤30	321	160	22

**PRODUCT SIZE**

(Unit: mm)

Thickness	Width x Length
4~30	1,250 × 2,500 1,525 × 3,050

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