

ALHIGHCE™

ALHIGHCE™ is a 5052 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™ helps to reduce customers' costs.

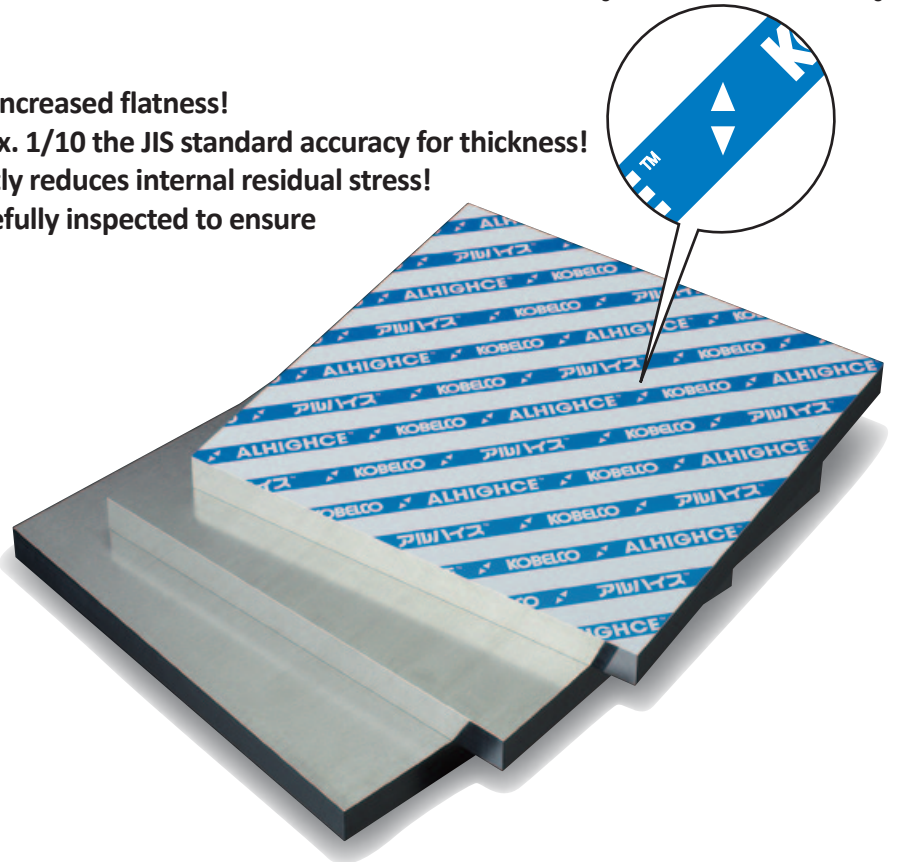
FEATURES

- ▶ Improved manufacturing processes offer increased flatness!
- ▶ A superior rolling technology offers approx. 1/10 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

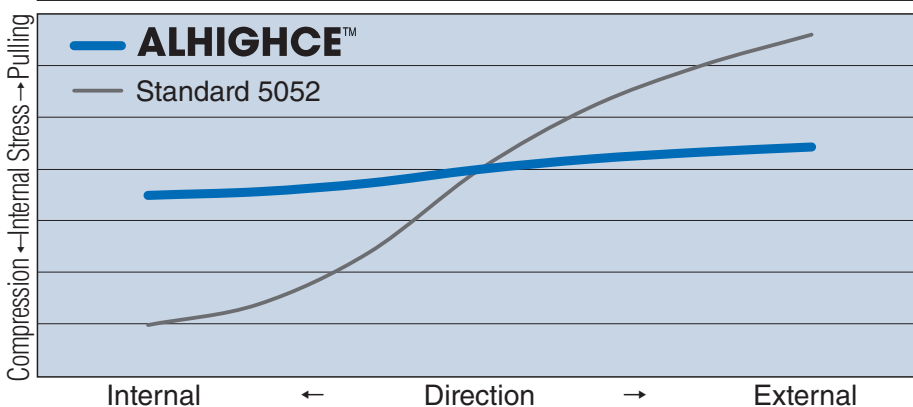
Semiconductor manufacturing equipment, LCD manufacturing equipment, Solar panel manufacturing equipment, Robots, Medical equipment, OA equipment, Optical equipment, Various molds, Tools, etc.

Marking to show direction of rolling



RESIDUAL STRESS

Distribution of Internal Stress over Direction of Thickness



QUALITY/REFINING/COMPOSITION**A5052P-H112**

(Unit: Wt%)

Si	Fe	Cu	Mn	Mg	Cr	Zn	Al
≤0.25	≤0.40	≤0.10	≤0.10	2.2-2.8	0.15-0.35	≤0.10	Remainder

THICKNESS ACCURACY

(Unit: mm)

Thickness	4≤-≤6	6<-≤12	12<-≤16	16<-≤18	18<-≤22	22<-≤25	25<-≤35	35<-≤45	45<-≤50
ALHIGHCE™ Tolerance	±0.04	±0.05	±0.08	±0.09	±0.10	±0.12	±0.15	±0.20	±0.25
Variation per Original Plate (ref.)	0.02	0.03	0.05	0.06	0.07	0.09	0.12	0.15	0.2

Reference

Thickness	4	5	6	6<-≤8	8<-≤11	11<-≤12	12<-≤16	16<-≤19	19<-≤21	21<-≤22	22<-≤27	27<-≤29	29<-≤35	35<-≤40	40<-≤49	49<-≤50
ALJADE™ Tolerance	±0.06	±0.07	±0.08	±0.10			±0.15	±0.18	±0.20	±0.22	±0.25	±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™** Thickness 4-50mm 0.2mm or less/M**MECHANICAL PROPERTIES (TYPICAL VALUES)**

Thickness (mm)	Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation (%)
4<-≤13	226	133	23
13<-≤50	203	104	31

PRODUCT SIZE

(Unit: mm)

Thickness	Width x Length
4~50	1,250 × 2,500 1,525 × 3,050

KOBE STEEL, LTD.

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