

# ALJADE™

ALJADE™ is a 5052 high precision aluminum alloy plate with greatly improved flatness and thickness tolerance, as well as reduced residual stress, over JIS standards.

Compared to the previous ALJADE™, flatness and accuracy of thickness have been even further improved, while available material thickness has been increased from 50mm to up to 100mm.

Offering reduced cutting time, less annealing after processing and higher yield rates, ALJADE™ helps to reduce customers' costs.

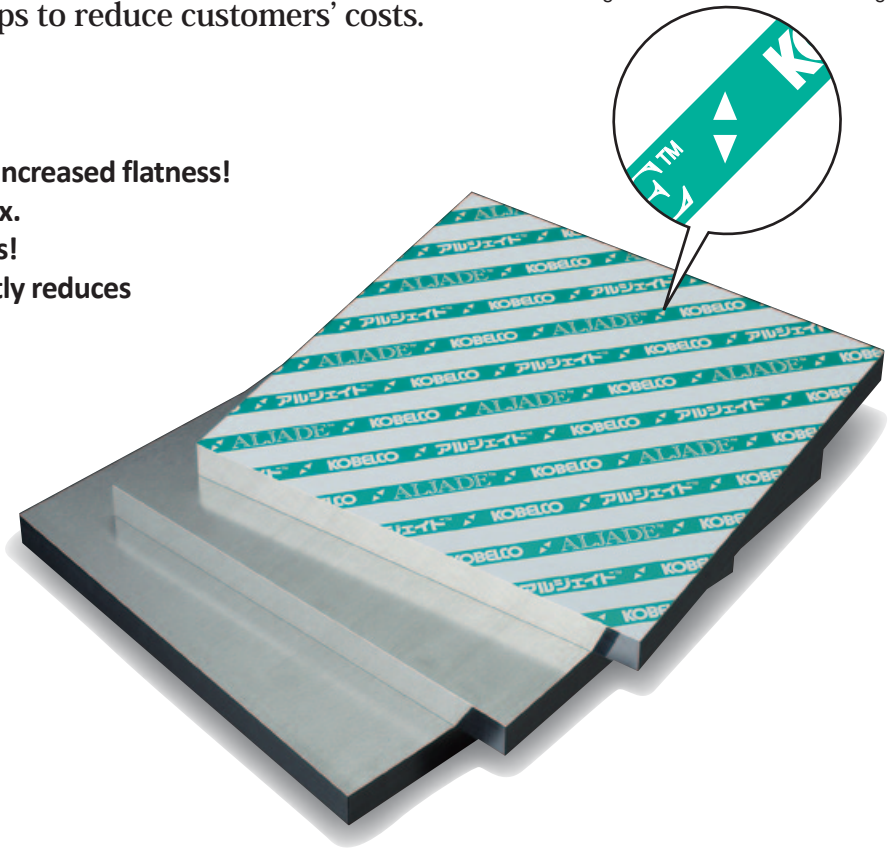
Marking to show direction of rolling

## FEATURES

- ▶ Improved manufacturing processes offer increased flatness!
- ▶ A superior rolling technology offers approx. 1/4 the JIS standard accuracy for thickness!
- ▶ A distinctive heat treatment process greatly reduces internal residual stress!

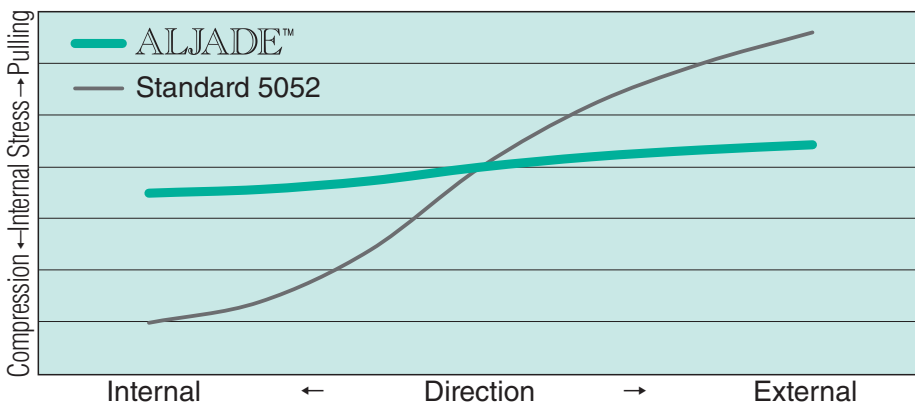
## APPLICATIONS

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



## 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	5	6	6<-≤12	12<-≤16	16<-≤19	19<-≤21	21<-≤22
ALJADE™ Tolerance	±0.06	±0.07	±0.08	±0.10	±0.15	±0.18	±0.20	±0.22
Thickness	22<-≤27	27<-≤35	35<-≤49	49<-≤54	54<-≤64	64<-≤74	74<-≤100	
ALJADE™ Tolerance	±0.25	±0.30	±0.40	±0.50	±0.60	±0.65	±0.85	

### Reference

Thickness	4≤-≤5	5<-≤6	6<-≤8	8<-≤11	11<-≤12	12<-≤15	15<-≤16	16<-≤20	20<-≤22	22<-≤29	29<-≤35	35<-≤40	40<-≤45	45<-≤50
Previous ALJADE™ Tolerance	±0.08		±0.10		±0.15	±0.20		±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

Previous  
ALJADE™ Thickness 4-50mm 0.4mm or less/M  
Flatness



ALJADE™

Thickness 4-50mm 0.2mm or less/M  
Thickness 50<-70mm 0.6mm or less/M  
Thickness 70<-100mm 0.8mm 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<-≤13	226	133	23
13<-≤50	203	104	31

## PRODUCT SIZE

(Unit: mm)

Thickness	Width x Length
4~100	1,250 × 2,500 1,525 × 3,050

## KOBE STEEL, LTD.

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