	ALCA 5 / AA5083	MAX 5 / AA5083	ALCA MAX / 2XXX	BUS PLATE / AA1370-50
PROCESSING CHARACTERISTICS				
Weldability				
WIG/MIG	Very good	Very good	Excellent	Excellent
By resistance	Very good	Very good	N/A	Excellent
Anodizing				
Hard anodizing	Excellent	Excellent	Good	N/A
Decorative	Not suitable	Not suitable	Not suitable	N/A
Polishing ability	Very good	Very good	Very good	N/A
Corrosion resistance				
Inland atmosphere	Excellent	Excellent	Poor	Very good
Marine atmosphere	Good	Good	Poor	N/A
Machinability	Excellent	Excellent	Excellent	Average
AVAILABILITY				
Thickness	0.250” to 4.000”	up to 42.5”	Up to 20.250” (1 inch incremental)	Plate : 0.250” to 4.00” Blocks : Up to 29.25”
Widths	48.5” / 60.5” / 72.5” / 96.5”	up to 102”	72.5”	Up to 76.5”
Lengths	96.5” / 144.5” / 289.0”	up to 354”	148.5”	Up to 354”
Non-standard thicknesses, widths and lengths	Available on inquiry	Available on inquiry	Available on inquiry	Available on inquiry
Milling capability	42.5” thick ; 120.0” width ; 293.0” length Coated with protective film on both side.		May be available milled and coated with protective film on the milled sides. Other tolerances may be applicable.	May be available milled and coated with protective film on the milled sides. Other tolerances may be applicable.
CHEMICAL COMPOSITION (Weight-%)				
Al	Bal.	Bal.	Bal.	min. 99.70
Si	max. 0.4	max. 0.4	max. 0.20	max. 0.07
Fe	max. 0.4	max. 0.4	0.85 / 1.15	0.10 / 0.18
Cu	max. 0.1	max. 0.1	2.70 / 3.25	max. 0.01
Mn	0.4 / 1	0.4 / 1	max. 0.07	max. 0.003
Mg	4 / 4.9	4 / 4.9	0.95 / 1.25	max. 0.01
Cr	0.05 / 0.25	0.05 / 0.25	0.85 / 1.20	max. 0.003
Ni	/	/	max. 0.15	/
Zn	max. 0.25	max. 0.25	/	max. 0.03
Ti + Zr	max. 0.15	max. 0.15	/	/
Ti + V	/	/	/	max. 0.004
Ti	/	/	0.04 / 0.07	/
B	/	/	/	max. 0.006
Ga	/	/	/	max. 0.02
PHYSICAL PROPERTIES (Typical values)				
Density	0.0961 lb/in^3	0.0961 lb/in^3	0.100 lb/in^3	0.0975 lb/in^3
Elastic modulus	10.3 x 10^6 PSI	10.3 x 10^6 PSI	10.3 x 10^6 PSI	10 x 10^6 PSI
Coefficient of thermal expansion (68°F-212°F)	13.2 µin/in·°F	13.2 µin/in·°F	12.4 µin/in·°F	13.2 µin/in·°F
Thermal conductivity (68°F)	69.3 Btu/ft·h·°F	69.3 Btu/ft·h·°F	94 Btu/ft·h·°F	135 Btu/ft·h·°F
Electrical conductivity (68°F)	27% IACS	27% IACS	37% IACS	61.5% IACS
MECHANICAL STRENGTH (Typical values)				
Ultimate Tensile Strength	41000 PSI	41000 PSI	38000 PSI	12000 PSI
Yield Strength	18000 PSI	18000 PSI	20000 PSI	4000 PSI
Elongation	16%	16%	7%	28%
Brinell Hardness	70 HB	70 HB	81 HB	/
TOLERANCES				
Thickness	+/- 0.005”	+0.125” / -0.000”	+0.125” / -0.000”	Sawed plate : +/-0.020” Sawed block : +0.125” / -0.000”
Width and Length	+0.125” / -0.000”	+0.250” / -0.000”	+0.250” / -0.000”	+0.250” / -0.000”
Flatness				
≤ 0.500”	0.015” *	/	/	Sawed plate : 0.035” *
≥ 0.625”	0.005” *	/	/	Sawed plate : 0.035” *
Roughness	≤ 16 min	≤1000 µin	≤1000 µin	≤1000 µin
Surfaces condition	Precision milled	Precision sawed	Precision sawed	Precision sawed
Edges condition	Precision sawed	Precision sawed	Precision sawed	Precision sawed
	** Checked on a granite table using a flatness state of the art measuring device. This is measured on several 1m sections.*			** Checked on a granite table using a flatness state of the art measuring device. This is measured on several 1m sections.*

PCP PRODUCTS