Positioning of the new Alcan plate: Super Plate 6056 (AA6056)

Super Plate 6056 has been developed with its main target as offering a substitution product for steel (achievement of the mechanical properties of low grade steel with 6xxx series alloy by offering the usual advantages of aluminium vs. steel like better machinability and lower weight) and an alternative to 6061/6082 when higher strength and better machinability are requested. When corrosion behaviour is a key issue, Super Plate 6056 offers an excellent solution compared to 2024/2017A.

Targeted applications of Super Plate 6056:

- Machinery applications where moderate to high strength and toughness are required
- Machinery applications where moderate to high strength, toughness, weldability and some corrosion resistance are required
- Transport applications where higher strength and toughness compared to those of conventional 6000 series alloys are required.

Technical data

	7075	2024	**Super Plate 6056**	6013	6061
Temper	T651	T351	**T651**	T651	T651
Thermal conductivity (Btu/ft.h.°F)	75	70	**95**	95	96
Weldability	Bad	Poor	**Excellent**	Excellent	Excellent
Corrosion resistance	Fair	Bad	**Excellent**	Excellent	Excellent
Anodizing: Technical	Fair	Bad	**Fair/Good**	Fair/Good	Good
Anodizing: Decorative	No	No	**Fair**	Fair	Fair
Density (lb/in^3)	0.101	0.100	**0.098**	0.098	0.098
Coefficient of expansion (µin./in.°F)	13.1	12.9	**13.0**	13.0	13.1
Elastic modulus	10.4	10.6	**10.1**	10.1	10.0
Machinability	Good	Good	**Excellent**	Excellent	Good
Shape Stability	Medium	Low	**Good**	Good	Good

Yield Strength and hardness comparison