

Car Sheet Metal | Haomei Aluminum

Aluminum car sheet metal material substitutions for automotive closures have the potential to rekindle the passion for innovative vehicle design. In recent years, carmakers have increasingly turned to aluminium sheet metal for its lightweighting and energy absorption capacities.

We love cars that are fun to drive and safe. But we also want every dirham to count at the petrol pump and to limit the environmental impact of our driving. Cars that are built using aluminium are lighter and use less fuel per kilometre. Electric cars made with aluminium can go further on each charge. That is why more and more of the metal of the future is used to make the vehicles on our roads.

Haomei Aluminium has exported aluminium for international car-makers for decades. Today vehicle companies are making parts for some of the most famous global car brands using our metal. In the gas-guzzling 1970s the average car only contained about 35 kilograms of light-weight aluminium, and a lot of other materials like steel. Experts expect the average car to contain 250 kilograms of aluminium by 2025.

The Specification of Car Sheet Metal Are:

Application	Auto Parts	Alloy	Thickness(mm)	Width(mm)
Car Body	Automotive door	5182	0.15-600	20-2600
	Front and rear cover			
	Automobile fender			
	Car lift			
	Automotive roof	5083		
		5754		
Chassis	Bottom guard	5083/5754	0.15-600	20-2600
	Wheel hub	6061	0.30-600	150-2600
	Battery bottom plate			
Power System	Fuel Tank	5083	0.15-600	150-2600
		5052		
	Gas Tank	5083		
		5052		
	Power Battery Shell Material	3003	0.20-4.5	20-2600

The Properties of Car Sheet Metal Thickness are:

Mechanical Properties	
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Alloy		Ultimate Tensile Strength (MPa)	Yield Strength (MPa)	Elongation (%)	n-value	r-value
5000 Series	AA5022	275	135	30	0.3	0.67
	AA5023	285	135	33	-	-
	AA5182	265	125	28	0.33	0.8
	AA5052	190	90	26	0.26	0.66
	AA5754	212	90	22	0.34	-
6000 Series	AA6022	275	155	31	0.25	0.6
	AA6016	235	130	28	0.23	0.7
	AA6111	290	160	28	0.26	0.6

The Advantages of Sheet Metal For Welding Cars are:

- increased strength due to age hardenability --> down gauging
- no stretcher strain marks --> suitable for visible inner panels
- same alloy family as outer sheet --> easier process scrap recycling
- formability sufficient for most panels

