

Titanium Aluminium and Titanium Carbon Aluminium



Titanium Aluminium

Aluminium’s mechanical and physical properties are enhanced with the use of alloying elements. These alloying elements are commonly referred to as hardeners. Aluminium-based master alloys which contain the hardener elements in high concentrations, provide a convenient and economical way to add them to aluminium to achieve desired properties. These master alloys readily go into solution at lower liquid aluminium temperatures, thus minimizing dross formation and solubility of hydrogen. Lower furnace temperatures also mean reduced energy consumption and longer furnace life.

Titanium aluminium master alloys provide a precise and consistent source of rapidly dissolving titanium. Titanium provides an important contribution to grain refinement; it is known for its powerful effect of grain growth restriction which helps control the as-cast structure of aluminium alloys.

Alloy	Designation	Color Code	Ti	Si	Fe	V	Others		Form
							Each	Total	
6% Ti	CEN-92202		5.5-6.5%	0.30%	0.30%	0.30%	0.04%	0.10%	Waffle / rod
10% Ti	AA-H2210		9.0-11.0%	0.30%	0.30%	0.50%	0.04%	0.10%	Waffle
	CEN-92204		9.0-11.0%	0.30%	0.30%	0.50%	0.04%	0.10%	

Composition is a maximum unless shown as a range.

Titanium Carbon Aluminium

In casthouse applications, the control of grain size is absolutely essential in maintaining product consistency and quality, reducing costs, and maintaining high levels of productivity. The controlled addition of AMG Aluminum’s titanium carbon aluminium grain refiners to molten aluminium releases nucleant particles that promote equiaxed, fine grain structures throughout the cast alloy, thus avoiding formation of columnar crystals. Casting speed can also be increased.

Alloy	Designation	Color Code	Ti	C	Si	Fe	B	V	Others		Form
									Each	Total	
3% Ti - 0.15% C	AA-H2231		2.6-3.4%	0.08-0.22%	0.30%	0.30%	0.004%	0.30%	0.03%	0.10%	Rod

Composition is a maximum unless shown as a range.

• Others on request

