









Aluminum Strontium Alloys

Modification of the morphology of the eutectic silicon phase in aluminum silicon alloy castings from coarse platelets to a fine fibrous structure results in improved soundness and mechanical properties, particularly ductility. The user of strontium to “modify” the structure of aluminum silicon casting alloys is an effective and widely accepted practice.

Strontium differs from other modifiers in that it retains its modification effectiveness for extended periods of melt holding time. The modification provided by strontium tends to survive repeated remelting so that strontium is commonly referred to as a “permanent” modifier.

KB Alloys strontium-rich, aluminum master alloys provide convenient, stable and effective sources of strontium for the aluminum foundry man, as well as the producer of foundry ingot.

Aluminum Strontium

Alloy		Composition Limits Maximum unless shown as a range						Aluminum Association Color Coding	Form		
3.5%Sr	H2012	Sr	3.2-3.8	Si	0.2	Others Each	0.03	 1 lt blue	Rod		
				Fe	0.3	Total	0.1				
				P	0.01						
				Ca	0.03						
5%Sr		Sr	4.5-5.5	Si	0.2	Ba	0.05	 1 lt blue	Rod		
				Fe	0.3	Ca	0.05		Cut Cast Bar		
				Mg	0.05	P	0.01		Waffle Ingot		
						Others Each	0.04		Sticks		
						Total	0.1				
10%Sr	H2007	Sr	9-11	Si	0.2	Ba	0.1	 1 lt blue	Waffle Ingot		
				Fe	0.3	Ca	0.03		Rod		
				P	0.01	Others Each	0.05		Buttons		
				Mg	0.05	Total	0.15		Korrek Bar		
10%Sr	H2017	Sr	9-11	Si	0.2	Others Each	0.05	 1 lt blue	Rod		
				Ti	.9-1.2	Fe	0.3		Total	0.15	Sheared Ingot
				B	.15-.25	Ca	0.02				
15%Sr		Sr	14-16	Ba	0.1	Others Each	0.03	 1 lt blue	Korrek Bar		
				Si	.2	Ca	0.05		Total	0.15	Waffle Ingot
				Fe	.3						
				P	.01						
20%Sr		Sr	18-22	Ba	0.1	Others Each	0.05	 1 lt blue	Waffle Ingot		
				Si	.2	Ca	0.05		Total	0.15	Buttons
				Fe	.3						
				P	.01						