

**Master Alloy Series**

Table 1.Product code and usage elucidation

Product code	Shape	Usage elucidation	Quantity needed
AlCu50	Ingot	Adjust the composition of Aluminium alloy	Compute by the formula
AlFe20	Waffle plate	Adjust the composition of Aluminium alloy	Compute by the formula
AlMn20	Ingot	Adjust the composition of Aluminium alloy	Compute by the formula
AlCr2	Ingot	Adjust the composition of Aluminium alloy	Compute by the formula
AlNi10	Ingot	Adjust the composition of Aluminium alloy	Compute by the formula
AlTi5B (tablet)	Tablet(Small ingot or bar)	Refining the grain of Aluminium and its alloys	1-2kg/tAl
AlTi5B(coil)	Coil	Refining the grain of Aluminium and its alloys	1-2kg/tAl
AIRE10	Waffle plate	Promote degas &slag-off,refine the grain and change the character	1kg/tAl
AlLa10	Waffle plate	Promote degas &slag-off,refine the grain and change the character	1kg/tAl
AlSi20	Ingot	Adjust the composition of Aluminium alloy	Compute by the formula
AlSr10(tablet)	Tablet(Small ingot or bar)	Modification	4kg/tAl
AlSr10(stick)	Bar $\varnothing$ 9.5mm H1000mm	Modification	4kg/tAl

Demonstration for the adding volume

If 5t of 0.7% Fe inclusion alloy is needed,known the born material contains 0.25% of Fe,the wanted AlFe20 alloys is xkg,here comes:

$$X=5000(0.7-0.25)/100 \times 20\%$$

Which means that the required adding volume=Total amount(required content—original)/main element in the master alloy

Table 2.Aluminium alloy's main chemical composition and physical properties:

Product	Main chemical composition%	Miscellaneous chemical element,no more than%												Physical properties	
		Cu	Si	Mn	Ti	Ni	Cr	Zr	Fe	Zn	Mg	Pb	Sb	Melting temperature $^{\circ}$ C	Property
AlCu50	Cu 48.0-52.0	—	0.40	0.35	0.10	0.20	0.10	—	0.45	0.30	0.30	0.20	0.10	570-600 $^{\circ}$ C	Frailty
AlFe20	Fe 18.0-22.0	0.10	0.20	0.30						0.10				1020 $^{\circ}$ C	Frailty
AlMn20	Mn 18.0-22.0	0.20	0.40		0.10	0.20	0.10		0.45	0.20	0.50	0.10	0.10	770-830 $^{\circ}$ C	Pliable
AlCr2	Cr 2.0-3.0		0.20						0.50	0.10				900-1000 $^{\circ}$ C	Segregation easily
AlNi10	Ni		0.20	0.10					0.50			0.10		680-730 $^{\circ}$ C	Pliable

	9.0-11.0														
AlTi5B	Ti 4.5-5.5	0.20	0.20	0.02		0.04	0.02	0.02	0.30	0.03	0.02			800°C	Pliable
	B 0.8-1.2														
ALRE10	RE 9.0-11.0	.02 0	0.20	0.02		0.04	0.02	0.02	0.30	0.03	0.02			800°C	Frailty
AlSi20	Si 18.0-22.0	0.20		0.35	0.1 0	0.20	0.10		0.45	0.20	0.40	0.10	0.10	700-800°C	Frailty
AlSr10	Sr 9.0-11.0	0.20	0.20	0.02		0.04	0.02	0.02	0.30	0.03	0.02			800°C	Pliable

**Packaging:**

AlCu50、AlRE10、AlTi5B tablet, 20kg/carton

AlTi5B coil about 180kg/carton, 3coils/pallet

AlFe20、AlMn20、AlCr2、AlNi10 in bulk

**Storage:**To be stored in a dry warehouse.Keep strictly from moisture.

