

SPECIFICATION SHEET

Aluminum Products For Heat Exchange Industry

Aluminum has light weight, anti-oxidation properties, leading it is widely used in heat exchange industry. Such as flat aluminum alloy tube, aluminum fin strip, aluminum tube coil, aluminum heat exchange shell, aluminum heat exchange profile/extrusion, aluminum mesh and so on.

No	Alloy	Thickness	Width	Length
1	1050,1060,1100	0.2-6.0mm	10 – 500 mm	100-12000 mm As per customer request.
	3003,5052			
	6060, 6061, 6063			

CHEMICAL COMPOSITION (%)

Standard: GB/T 3190-2008

Grade	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Al
1050	0.25	0.40	0.05	0.05	0.05	-	-	0.05	0.03	99.5
1060	0.25	0.35	0.05	0.03	0.03	-	-	0.05	0.03	99.6
1070	0.20	0.25	0.04	0.03	0.03	-	-	0.04	0.03	99.7
1100	0.95 Si+Fe		0.05-0.20	0.05	-	-	-	0.10	-	99.0
3003	0.6	0.7	0.05-0.20	1.0-1.5	-	-	-	0.10	-	remain
5052	0.25	0.40	0.10	0.10	2.2-2.8	0.15-0.35	-	0.10	-	remain
6060	0.3-0.6	0.1-0.3	0.10	0.10	0.35-0.6	0.05	-	0.15	0.10	remain
6061	0.4-0.8	0.70	0.15-0.4	0.15	0.8-1.2	0.04-0.35	-	0.25	0.15	remain
6063	0.2-0.6	0.35	0.10	0.10	0.45-0.9	0.10	-	0.10	0.10	remain

MECHANICAL PROPERTIES

Standard: GB/T 3880.2-2006; GB/T 4437.1-2015

Alloy	Alclad classify	Temper	Sample Temper	Thickness /mm	Tensile strength R _m /MPa	Yield strength R _{p0.2} /MPa	Elongation/%		Bending Radius*1			
							A _{50mm}	A _{5.65}				
1050	-		O	O	ALL	60-95	20	25	22	-		
			H112	O	ALL	60	-	25	22	-		
			H22	H22	>0.20-0.30					2	-	0t
					>0.30-0.50				-	3	-	0t
					>0.50-0.80		80-120			4	-	0t
					>0.80-1.50			65		6	-	0.5t
					>1.50-3.0					8	-	0.5t
					>0.20-0.30					1	-	0.5t
			H24	H24	>0.30-0.50				-	2	-	0.5t
					>0.50-0.80		95-130			3	-	0.5t
					>0.80-1.50					4	-	1.0t
					>1.50-3.0			75		5	-	1.0t
					O	O	ALL	60-95	15	25	22	-
					H112	H112	ALL	60	-	25	22	-
1060	-		H22	H22	>0.50-1.50	80-120	60	6	-	-		
					>1.50-6.0				12	-	-	
			H24	H24	>0.20-0.30				1	-	-	
					>0.30-0.50		95-135	70	2	-	-	

Alloy	Alclad classify	Temper	Sample Temper	Thickness /mm	Tensile strength R _m /MPa	Yield strength R _{p0.2} /MPa	Elongation/%		Bending Radius* ¹		
							A _{50m3m}	A _{5.65}			
1060	-	H24	H24	>0.50-0.80	95-135	70	2	-	-		
				>0.80-1.50			4	-	-		
				>1.50-3.0			6	-	-		
1100	-	O	O	ALL	75-105	20	25	22	-		
				H112	H112	ALL	75	25	25	22	-
		H22	H22	>0.20-0.50	95-130	75	3	-	0t		
				>0.50-1.50			5	-	0t		
				>1.50-6.0			8	-	0t		
				>0.20-0.30			1	-	0t		
H24	H24	>0.30-0.50	110-145	95	2	-	0t				
		>0.50-1.50			3	-	0t				
		>1.50-4.0			5	-	0t				
		O			O	ALL	95-130	35	25	22	-
		H112			H112	≤ 1.60	95	35	-	-	-
3003	-	H22	H22	> 1.60	95	35	25	22	-		
				>0.20-0.50	6	-	0t				
				>0.50-1.50	120-160	80	7	-	0.5t		
		H24	H24	>1.50-3.0	145-195	115	8	-	1.0t		
				>0.20-0.50			4	-	0.5t		
				>0.50-1.50			4	-	1.0t		
				>1.50-3.0			5	-	1.0t		
O	O	ALL	170-240	70	15	17	-				
H112	H112	ALL	170	70	13	15	-				
5052	-	H22	H22	>0.20-0.50	210-260	130	5	-	0.5t		
				>0.50-1.50			6	-	1.0t		
				>1.50-3.0			7	-	1.5t		
		H24	H24	>0.20-0.50	230-280	150	4	-	0.5t		
				>0.50-1.50			5	-	1.5t		
>1.50-3.0	6	-	2.0t								
6061	-	T4	T4	ALL	180	110	16	14	-		
				T51	T51	≤16.0	240	205	8	7	-
				T6	T6	>0.40-1.20	290	240	6	-	2.5t
6063	-	T4	T4	≤12.5	130	70	14	12	-		
				>12.5-25.0	125	60	-	12	-		
		T5	T5	≤25.0	175	130	6	8	-		
		T6	T6	>0.50-1.20	205	170	8	-	-		
6082	-	T4	T4	≤25.0	205	110	12	14	-		
				≤5.0	290	250	6	8	-		
				T6	T6	>50-25.0	310	260	8	10	-

*1 Coil samples bending 90°, t – thickness of coil

PHYSICAL PROPERTIES

Property	Value	Unit
Density(20°C)	2.65-2.73	g/cm ³
Melting Point	575-660	°C
Thermal Expansion	23.4-23.8	(10-6K-1)(20/100°C)
Specific heat capacity	890-910	J/(Kg.K)(0/100°C)
Modulus of Elasticity	69-71	GPa
Thermal Conductivity	172-225	W/(m. K) 20°C
Resistivity	29.1-38.22	nΩ .m

Formability
Very Good

Weldability
Good

Machinability
Very Good

Corrosion Resistance
Very Good

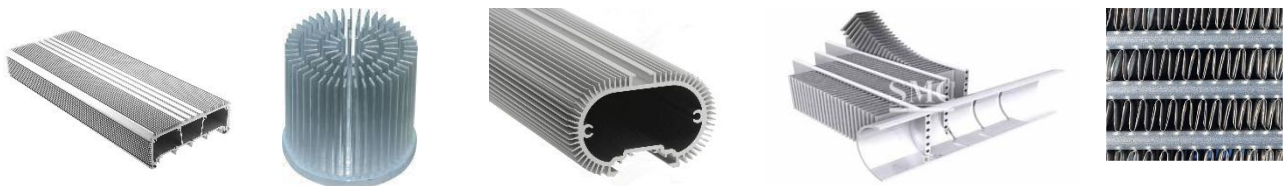
APPLICATIONS

Heat exchanger aluminium is widely used in refrigerator parts, car radiator, condenser, oil cooler, evaporator, cooling system and other heat exchange industry.

SURFACE TREATMENT

Anodized, Electrophoresis, Powder coating, Silver matt, wooden grain, etc. Color can be customized as per customer request.

PRODUCTS



PACKING

Shanghai Metal Products are packed and labeled according to the regulations and customer's requests. Great care is taken to avoid any damage which might be caused during storage or transportation. In addition, clear labels are tagged on the outside of the packages for easy identification of the product I. D. and quality information.

