

SPECIFICATION SHEET

Aluminum profile for Pipeline Integration

Shanghai Metal Corporation (SMC) is the leading manufacturer and supplier of aluminum profile for Pipeline Integration. We provide various styles of special pipes available in different sizes of excellent quality at reasonable price. We are glad to customize products according to your request.

No	Alloy	Size	Temper
1	5052/5083/6061/6063/6082 /7075	Customized	T3, T4, T5, T6, T7, etc

Chemical composition (%)

Standard: GB/T 3190-2008

Grade	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Al
5052	0.25	0.40	0.10	0.10	2.2-2.8	0.15-0.35	-	0.10	-	Rest
5083	0.40	0.40	0.10	0.40-1.0	4.0-4.9	0.05-0.25	-	0.25	-	Rest
6061	0.40-0.8	0.7	0.15-0.40	0.15	0.8-1.2	0.04-0.35	-	0.25	0.15	Rest
6063	0.2-0.6	0.35	0.10	0.10	0.45-0.9	0.10	-	0.10	0.10	Rest
6082	0.7-1.3	0.50	0.10	0.40-1.0	0.6-1.2	0.25	-	0.20	0.10	Rest
7075	0.40	0.50	1.2-2.0	0.30	2.1-2.9	0.18-0.28	-	5.1-6.1	0.20	Rest

Mechanical Properties

Standard: GB/T 3880.2-2006

Alloy	Alclad classify	Temper	Sample Temper	Thickness /mm	Tensile strength R _m /MPa	Yield strength R _{p0.2} /MPa	Elongation/%		HBW Typical value
							A	A ₅₀	
5052	-	F,H112	F,H112	ALL	170	70	15	13	47
		O,H112	O,H112		170-230	70	17	15	45
5083	-	F	O H111	ALL	270	110	12	10	70
		H112	H112	ALL	270	125	12	10	70
6061	-	T4	T4	≤25	180	110	15	13	65
		T6	T6	≤5 5<t≤25	260 260	240 240	9 10	7 8	95 95
6082	-	O,H111	O,H111	all	Max.160	Max.110	14	12	35
		T4	T4	≤25	Min.205	Min.110	14	12	70

		Open profile T5	Open profile T5	≤ 5	Min.270	Min.110	8	6	90
		Open profile T6	Open profile T6	≤ 5 $5 < t \leq 25$	Min.290 Min.310	Min.250 Min.260	8 10	6 8	95 95
		Hollow profile T5	Hollow profile T5	≤ 5	Min.270	Min.230	8	6	90
		Hollow profile T6	Hollow profile T6	≤ 5 $5 < t \leq 25$	Min.290 Min.310	Min.250 Min.260	8 10	6 8	95 95
7075	-	T6,T6510,T6511	T6,T6510,T6511	≤ 25 $25 < t \leq 60$	Min.530 Min.530	Min.460 Min.470	6 6	4 -	150 150
		T73,T73510,T73511	T6,T6510,T6511	≤ 25	Min.485	Min.420	7	5	135

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

Physical Properties

Property	Value	Unit
Density(20°C)	2.72	g/cm ³
Melting Point	620-650	°C
Thermal Expansion	23.5	(10-6K-1)(20/100°C)
Specific heat capacity	899	J/(Kg.K)(0/100°C)
Modulus of Elasticity	70	GPa
Thermal Conductivity	205	W/(m. K) 20°C
Resistivity	32	nΩ .m

Formability

Very Good

Weldability

Good

Machinability

Very Good

Corrosion Resistance

Very Good

Applications

1. For Pipe Integration

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.

- 1) Shanghai Metal Standard
- 2) Customization

