

航空航天用铝合金中厚板产品 ALUMINIUM ALLOY PLATES FOR AEROSPACE APPLICATION



化学成分 Chemical Composition

(wt%)

合金 Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Zr	Ti	参考标准 Standard	备注 Remarks
7050	0.12	0.15	2.0~2.6	0.10	1.9~2.6	0.04	5.7~6.7	0.08~0.15	0.06	GB AMS EN	
7150	0.12	0.15	1.9~2.5	0.10	2.0~2.7	0.04	5.9~6.9	0.08~0.15	0.06		
7055	0.10	0.15	2.0~2.6	0.05	1.8~2.3	0.04	7.6~8.4	0.08~0.25	0.06		
7A85	0.05	0.08	1.2~2.0	0.10	1.2~2.0	0.05	7.0~8.2	0.08~0.16	0.05		
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		
7A04	0.50	0.50	1.4~2.0	0.20~0.60	1.8~2.8	0.10~0.25	5.0~7.0	—	0.05		
7A09	0.50	0.50	1.2~2.0	0.15	2.0~3.0	0.16~0.30	5.1~6.1	—	0.10		
6061	0.40~0.80	0.70	0.15~0.40	0.15	0.80~1.2	0.04~0.35	0.25	—	0.15		
2024	0.50	0.50	3.8~4.9	0.30~0.90	1.20~1.80	0.10	0.25	—	0.15		
5083	0.40	0.40	0.10	0.40~1.0	4.0~4.9	0.05~0.25	0.25	—	0.15		
2219	0.20	0.30	5.8~6.8	0.20~0.40	0.02	—	0.10	0.10~0.25	0.02~0.10		V0.05~0.15
2A14	0.6~1.2	0.70	3.9~4.8	0.40~0.10	0.40~0.80	—	0.30	—	0.15		
5A06	0.40	0.40	0.10	0.50~0.80	5.8~6.8	—	0.20	—	0.02~0.10		

板材规格 Specification

合金 Alloy	状态 Temper	厚度(mm) Thickness	宽度(mm) Width
7050	T7451	4~260	1200~3800
	T7651	4~260	1200~3800
7150	T7651	4~260	1200~3800
7055	T7751	4~260	1200~3800
7A85	T7751	4~260	1200~3800
	T7452	4~260	1200~1650
7075	T651	4~260	1200~3800
	T7651	4~260	1200~3800
	T7351	4~260	1200~3800
7A04	T651	4~260	1200~3800
7A09	T651	4~260	1200~3800
6061	T651	4~260	1200~3800
2024	T351	4~260	1200~3800
5083	H116/H321	4~260	1200~3800
2219	T62(MCS)	4~260	1200~3800
	T6(CS)		
	T87/C10S		
2A14	T6	4~260	1200~3800
5A06	H112	4~260	1200~3800

Note: Besides above typical specifications, capable to design to meet customized requirements.

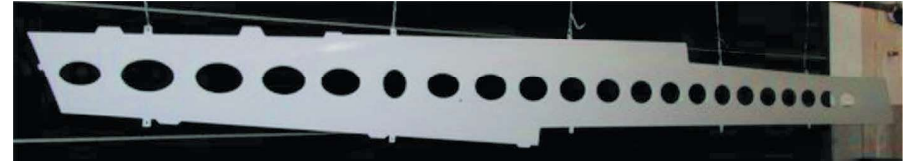


力学性能 Mechanical Properties

合金 Alloy	状态 Temper	方向 Direction	厚度(mm) thickness	抗拉强度 Rm(Mpa) Tensile Strength		屈服强度 Rp0.2(MPa) Yield Strength		断裂延伸率 A50% Breaking Elongation		标准 Standard
				标准 Standard	Measured	标准 Standard	Measured	标准 Standard	Measured	
7050	T7451	L	6~203	≥ 503	515~535	≥ 434	450~470	≥ 9	11.5~15.5	AMS4050
	T7451	LT		≥ 503	515~535	≥ 434	450~470	≥ 8	11~13.5	
	T7451	ST		≥ 469	500~520	≥ 407	420~440	≥ 3	8~10.5	
	T7651	LT		≥ 524	550~570	≥ 455	480~500	≥ 9	10~12.5	
7150	T7751	LT	6~100	≥ 517	585~590	≥ 565	550~555	≥ 6	10~12.5	AMS4252A
7055	T7751	LT	6~38	≥ 614	635~635	≥ 586	595~610	≥ 8	8~10.0	AMS4206A
7A85	T7651	LT	100~178	≥ 503	530~550	≥ 462	490~510	≥ 5	8.5~12.5	AMS4329
	T7452	LT	120~265	≥ 495	520~545	≥ 450	485~500	≥ 5	10~12.5	XSJ/B8Q-76
7075	T651	LT	6~260	≥ 540	570~590	≥ 460	495~515	≥ 8	10~13.5	GB/T3380
	T7651	LT	6~102	≥ 538	550~560	≥ 462	480~490	≥ 9	10.5~12.5	AMS4045K
	T7351	LT	6~102	≥ 476	500~520	≥ 393	420~435	≥ 7	10~12.5	AMS4078
7A04	T62	LT	6~80	≥ 490	600~610	≥ 410	535~540	≥ 3	10~12.5	GJB 2662A
7A09	T62	LT	6~80	≥ 490	550~570	≥ 410	495~500	≥ 3	14.5~17.5	GJB 2662A
6061	T651	LT	6~260	≥ 262	320~360	≥ 241	285~330	≥ 10	10~14.5	AMS4113E
2024	T351	LT	6~102	≥ 441	460~495	≥ 290	320~340	≥ 12	12.5~21.5	AMS-QQ-A-250/4
5083	H116/H321	LT	6~80	≥ 305	350~360	≥ 215	230~245	≥ 10	13.5~17.5	GB/T3380
2219	T62(MCS)	LT	12~100	≥ 370	420~430	≥ 250	285~230	≥ 7	14~15	GJB390A
	T6(CS)	LT		≥ 425	420~450	≥ 315	350~365	≥ 7	11~16.5	GJB390A
	T87/C10S	LT		≥ 440	450~475	≥ 350	360~390	≥ 6	8~13.5	GJB390A
2A14	T6	LT	20~120	≥ 450	455~470	≥ 390	400~440	≥ 5	5~10	GJB390A
5A06	H112	LT	13~200	≥ 295	330~380	≥ 135	145~265	≥ 6	15~30	GJB 2662A



典型应用 Typical Applications



• 用于飞机机翼壁板——7150-T7751、2024-T351板材
Applied to the wing panels of aircraft——7150-T7751、2024-T351 plates



• 用于燃料贮箱——2219板材
Applied to the fuel tank——2219 plates



• 用于飞机的唇口格栅——7050厚板
Applied to the lip mouth grille of aircraft——7050 plates

航空航天用铝合金薄板 ALUMINIUM ALLOY SHEETS FOR AEROSPACE



化学成分 Chemical Composition

(wt%)

合金 Alloy	Si	Fe	Cu	Mn	Mg	Ni	Cr	Zn	Ti	参考标准 Standard
2024	0.50	0.50	3.8~4.9	0.3~0.9	1.2~1.8	—	0.10	0.25	0.15	GB/T 3190 EN 573 ASTM B209
2A12	0.50	0.50	3.8~4.9	0.3~0.9	1.2~1.8	0.10	—	0.30	0.15	
2017	0.2~0.8	0.7	3.5~4.5	0.4~1.0	0.4~0.8	—	0.10	0.25	0.15	
2A14	0.6~1.2	0.7	3.9~4.8	0.4~1.0	0.4~0.8	0.10	—	0.30	0.15	
5A06	0.40	0.40	0.10	0.5~0.8	5.8~6.8	—	—	0.20	0.02~0.10	
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	
7A09	0.50	0.50	1.2~2.0	0.15	2.0~3.0	—	0.16~0.30	5.1~6.1	0.10	
7A04	0.50	0.50	1.4~2.0	0.2~0.6	1.8~2.8	—	0.10~0.25	5.0~7.0	0.10	

Note: AMS could be met as well according to customer requirements.

板材规格 Specification

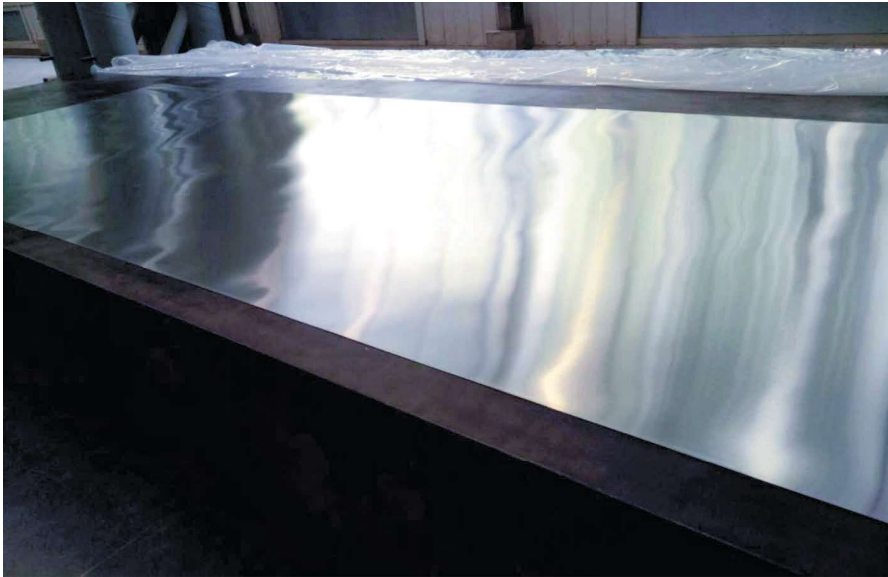
合金 Alloy	状态 Temper	厚度(mm) Thickness	宽度(mm) Width
2A12	T6/ T4/ T3	0.3~4.0	1000~2600
2024			
2017			
2A14			
5A06	O	0.5~4.0	1000~2600
7A09	T6	0.3~4.0	1000~2600
7A04			
7075			



力学性能 Mechanical Properties

合金 Alloy	状态 Temper	厚度(mm) thickness	抗拉强度 Rm(Mpa) Tensile Strength		屈服强度 Rp0.2(MPa) Yield Strength		断裂延伸率 A50% Breaking Elongation		标准 Standard
			标准 Standard	Measured	标准 Standard	Measured	标准 Standard	Measured	
2A12	T4	0.3~3.5	≥ 405	415~430	≥ 270	285~300	≥ 13	15~20	GB/T3880 EN485 ASTM B209
2024	T4	0.3~3.5	≥ 425	430~450	≥ 275	280~310	≥ 15	18~21	
2017	T4	0.3~3.5	≥ 390	395~405	≥ 245	255~270	≥ 14	19~23	
2A14	T4	0.5~3.5	≥ 395	415~430	≥ 240	255~270	≥ 14	18~22	
5A06	O	0.5~3.5	≥ 315	330~360	≥ 155	175~205	≥ 16	19~23	
7075	T6	0.3~3.5	≥ 540	550~570	≥ 460	480~500	≥ 6	11~15	
7A09	T6	0.5~3.5	≥ 480	550~570	≥ 400	480~500	≥ 7	11~15	
7A04	T6	0.5~3.5	≥ 480	565~595	≥ 400	495~510	≥ 7	10~14	

Note: AMS could be met as well according to customer requirements.



典型应用 Typical Applications



航空薄壁件
Thin-walled component



飞机蒙皮
Skin for Aircraft

机翼壁板
Wing panel



蜂窝夹层面板
Honeycomb sandwich panel

