



Ganzhou Aluminium Co.,Ltd

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ALUMINIUM AND ALUMINIUM ALLOY SHEETS AND COILS

1. This is internal technical specification in ganzhou aluminium co.,ltd covering aluminium and aluminium alloy rolling coils and sheets.

2. Alloy, temper, coil/sheet thickness range refer to the following table:

Alloy	Temper	Sheet thickness	Coil thickness
1235	H12、H22	>0.20~6.00	>0.20~6.00
	H14、H24	>0.20~5.00	>0.20~5.00
	H16、H26	>0.20~4.00	>0.20~4.00
	H18	>0.20~3.00	>0.20~3.00
1070、1060 1050、1050A 1145、1100	F	>2.50~250.00	>2.50~18.00
	H112	>2.50~250.00	—
	O	>0.20~250.00	>0.20~18.00
	H12、H22、H14、H24	>0.20~6.00	>0.20~6.00
	H16、H26	>0.20~4.00	>0.20~4.00
	H18	>0.20~3.00	>0.20~3.00
1200	F	>2.50~250.00	>2.50~18.00
	H112	>2.50~150.00	—
	H12、H22、H14、H24	>0.20~6.00	>0.20~6.00
	H16、H26	>0.20~4.00	>0.20~4.00
	H18	>0.20~3.00	>0.20~3.00
3003	H112	>3.00~250.00	—
	O	>0.20~250.00	>0.20~15.00
	H12、H22、H14、H24	>0.20~6.00	>0.20~6.00
	H16、H26	>0.20~4.00	>0.20~4.00
	H18	>0.20~3.00	>0.20~3.00
	H28	>0.20~3.00	>0.20~3.00
	F	>3.00~250.00	>3.00~15.00
3004、3104	H112	>3.00~250.00	—
	O	>0.20~250.00	>0.20~15.00
	H111	>0.20~15.00	>0.20~7.00
	H12、H22、H32、H14	>0.20~6.00	>0.20~6.00
	H24、H34、H16、H26、 H36、	>0.20~4.00	>0.20~4.00
	H18	>0.20~3.00	>0.20~3.00
	H28、H38	>0.20~3.00	>0.20~3.00
3004、3104	O、H111	>0.20~15.00	>0.20~7.00
3005	H12、H22、H14	>0.20~6.00	>0.20~6.00
	H16	>0.20~4.00	>0.20~4.00



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3005	H24、H26、H18、H28	>0.20~3.00	>0.20~3.00
	O、H12、H22、H14、H24、	>0.20~5.00	>0.20~5.00
3105	H16、H26、H18	>0.20~3.00	>0.20~3.00
	H111	>0.20~7.00	>0.20~7.00
	H28	>0.20~2.00	>0.20~2.00
	H18	>0.20~3.00	>0.20~3.00
3102	O、H111	>0.20~250.00	>0.20~7.00
5182	H19	>0.20~2.00	>0.20~2.00
	F	>0.20~250.00	>0.20~12.00
5A03	H112	>0.20~250.00	—
	O	>0.20~250.00	>0.20~12.00
	H14、H24、H34	>0.20~4.50	>0.20~4.50
	F	>4.50~250	>0.20~12.00
5A05	O	>0.20~250.00	>0.20~12.00
	H112	>4.50~250	—
	F	>4.50~250	>0.20~12.00
5082	H18、H38、H19、H39	>0.20~3.00	>0.20~3.00
	F	>0.20~250.00	>0.20~12.00
5005	H112	>0.20~250.00	—
	O	>0.20~250.00	>0.20~12.00
	H111	>0.20~7.00	>0.20~7.00
	H12、H22、H32	>0.20~6.00	>0.20~6.00
	H14、H24、H34	>0.20~5.00	>0.20~5.00
5052	H16、H26、H36	>0.20~4.00	>0.20~4.00
	H18、H28、H38	>0.20~3.00	>0.20~3.00
	F	>0.20~250.00	>0.20~12.00
	H112	>0.20~250.00	—
	O	>0.20~250.00	>0.20~12.00
	H111	>0.20~7.00	—
	H12、H22、H32、H14、H24、H34	>0.20~6.00	>0.20~6.00
	H16、H26、H36	>0.20~4.00	>0.20~4.00
H18、H38	>0.20~3.00	>0.20~3.00	
5086	F	>0.20~250.00	—
	H112	>0.20~250.00	—
	O	>0.20~250.00	—
	H111	>0.20~7.00	—
	H12、H22、H32	>0.20~5.00	—
	H14、H24、H34	>0.20~4.00	—
	H18	>0.20~3.00	—
5083	F	>0.20~250.00	—



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	H112	>0.20~250.00	—
	O	>0.20~250.00	>0.20~12.00
	H111	>0.20~7.00	—
	H12、H22、H32	>0.20~6.00	—
	H14、H24、H34	>0.20~5.00	—
	H16、H26、H36	>0.20~4.00	—
5754	F	>0.20~250.00	—
	H112	>0.20~250.00	—
	O	>0.20~250.00	>0.20~12.00
	H12、H22、H32	>0.20~6.00	—
	H14、H24、H34	>0.20~5.00	—
	H16、H26、H36	>0.20~4.00	—
6061	F	>0.20~250.00	>0.20~15.00
	O		
6063	O	>0.20~250.00	>0.20~15.00
6A02	F、O	>0.20~250.00	>0.20~15.00
	H112、	>0.20~250.00	—
6082	F、O	>0.20~250.00	>0.20~15.00
8A06	F	>0.20~250.00	>0.20~18.00
	H112	>0.20~250.00	—
	H14、H24	>0.20~7.00	>0.20~7.00
8011	O	>0.20~250.00	>0.20~18.00
	H111	>0.20~7.00	>0.20~7.00
	H14、H24	>0.20~6.00	>0.20~6.00
	H18	>0.20~4.00	>0.20~4.00

3. Aluminium coil/sheet width and length specification:

thickness	Sheet Width and length		Coil width and ID	
	width	length	width	ID
>0.20~0.50	<1650	3500	1650	Φ76/Φ152/Φ305/ Φ405/Φ505/Φ605
>0.50~2.50	<1650	4000	1650	
>2.50~6.00	<1650	4000	1650	
>6.00~15.00	<1650	4000	—	—
>15.00~250.00	<1650		—	—

NOTE: Coil ID and paper or steel core shall be written in purchasing contract



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4. technical requirements

4.1 tolerance (mm)

4.1.1 .thickness tolerance of sheets and coils shall conform to the following table

Thickness tolerance	Width ≤1250	Width >1250
	Nominated width	
	tolerance (±)	
Cold rolling thickness >	0.008	0.01
>0.40~0.60	0.01	0.01
>0.60~1.00	0.015	0.015
>1.00~1.50	0.020	0.025
>1.50~2.00	0.025	0.025
>2.00~3.00	0.025	0.030
>3.00~4.00	0.030	0.035
>4.00~7.00	0.040	0.060
Hot rolling(DC) thickness >	0.10	0.15
>6.00~8.00	0.15	0.20
>6.00~8.00	0.20	0.25
>8.00~10.00	0.25	0.30
>10.00~15.00	0.30	0.35
>15.00~20.00	0.35	0.40
>20.00~30.00	0.40	0.45
>30.00~40.00	0.45	0.50
>40.00~50.00	0.50	0.60
>50.00~60.00	0.60	0.70
>60.00~80.00	0.70	0.80
>80.00~100.00	0.8	1.0
>100.00~150.00	1.0	1.2
>150.00~200.00	1.2	1.5
>200.00~250.00	1.5	2.0

4.1.2 sheet width tolerance

Thickness	width	
	width≤1250	width>1250~1650
	Width tolerance	



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≥2.5~6.0	+1.0	+1.5
≥6.0~15.0	+1.5	+2.0
≥15.0~250	+2.0	+3.0

4.1.3 sheet length tolerance

thickness	length			
	≤2000	>2000~4000	>4000~6000	>6000
	Length tolerance(+)			
≥2.5~6.0	3	5	6	10
≥6.0~15.0	5	4	6	12
≥15.0~250	2	3	6	10

4.1.4 length tolerance rolling directly from DC production line shall conform to table

thickness	length	
	≤2000~4000	>4000
	Length tolerance (+)	
≥7.0~12.0	4	5
>12.0~60.00	40	50

4.1.5 sheet diagonal tolerance

thickness	length			
	≤2000	>2000~4000	>4000~6000	>6000~12000
	tolerance (±)			
≥2.5~6.0	1.5	2	3	5
≥6.0~15.0	2	3	5	6
≥15.0~250	3	5	6	6



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4.1.6 Flatness

Thickness h (mm)	Laternal flatness (mm)			
	≤1200	> 1200~1500	> 1500~1650	Partial flatness
0.2<h≤1.0	≤6	≤7	≤8	Less 3 wave peak within 1000mm
1.0<h≤1.5	≤5	≤6	≤7	
1.5<h≤2.5	≤4	≤5	≤6	
2.5<h≤6.0	≤5	≤6	≤7	

4.2 physical properties

alloy	temper	Thickness (mm)	U.T.S R _m /MPa	ELOGATION R _{p0.2} /MPa	ELOGATION%		Bending radius
					A50m m	A5.65	
1235	H12	>0.20~0.30	95~130	—	2	—	—
	H22	>0.30~0.50			3	—	—
		>0.50~1.50			6	—	—
1235		>1.50~3.00			8	—	—
		>3.00~4.50			9	—	—
	H14 H24	>0.20~0.30	115~150	—	1	—	—
		>0.30~0.50			2	—	—
		>0.50~1.50			3	—	—
		>1.50~3.00			4	—	—
	H16 H26	>0.20~0.50	130~165	—	1	—	—
		>0.50~1.50			2	—	—
		>1.50~3.00			3	—	—
	H18	>0.20~0.50	145	—	1	—	—
>0.50~1.50		2			—	—	



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		>1.50~3.00			3	—	—
1070	O	>0.20~0.30	55~95	—	15	—	0t
		>0.30~0.50			20	—	0t
		>0.50~0.80			25	—	0t
		>0.80~1.50			30	—	0t
		>1.50~6.00	15	35	—	0t	
		>6.00~12.50		35	—	—	
		>12.50~50.0		—	30	—	

1070	H12 H22	>0.20~0.30	70~100	—	2	—	0t	
		>0.30~0.50			3	—	0t	
		>0.50~0.80			4	—	0t	
		>0.80~1.50			55	6	—	0t
		>1.50~3.00				8	—	0t
		>3.00~6.00				9	—	0t
	H14 H24	>0.20~0.30	85~120	—	1	—	0.5t	
		>0.30~0.50			2	—	0.5t	
1070		>0.50~0.80			3	—	0.5t	
		>0.80~1.50			65	4	—	1.0t
		>1.50~3.00				5	—	1.0t
		>3.00~6.00				6	—	1.0t
	H16 H26	>0.20~0.50	100~135	—	1	—	1.0t	
		>0.50~0.80			2	—	1.0t	
		>0.80~1.50			75	3	—	1.5t
		>1.50~4.00				4	—	1.5t
	H18	>0.20~0.50	120	—	1	—	—	
		>0.50~0.80			2	—	—	
		>0.80~1.50			3	—	—	
		>1.50~3.00			4	—	—	



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H112	>4.50~6.00	75	35	13	—	—
	>6.00~12.50	70	35	15	—	—
	>12.50~25.00	60	25	—	20	—
	>25.00~75.00	55	15	—	25	—
F	>2.50~250.00	—				

1060	O	>0.20~0.30	60~100	15	15	—	—
		>0.30~0.50			18	—	—
		>0.50~1.50			23	—	—
		>1.50~6.00			25	—	—
		>6.00~80.00			25	22	—
	H12 H22	>0.50~1.50	80~120	60	6	—	—
		>1.50~6.00			12	—	—
	H14 H24	>0.20~0.30	95~155	70	1	—	—
		>0.30~0.50			2	—	—
		>0.50~0.80			2	—	—
		>0.80~1.50			4	—	—
>1.50~3.00		6			—	—	
>3.00~6.00		10			—	—	
1060	H16 H26	>0.20~0.30	110	75	1	—	—
		>0.30~0.50			1	—	—
		>0.50~0.80			2	—	—
		>0.80~1.50			3	—	—
		>1.50~4.00			5	—	—
	H18	>0.20~0.30	125	85	1	—	—
		>0.30~0.50			2	—	—
		>0.50~1.50			3	—	—
		>1.50~3.00			4	—	—
	H112	>4.50~6.00	75	—	10	—	—
		>6.00~12.50	75		10	—	—
		>12.50~40.00	70		—	18	—



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		>40.00~80.00	60		—	22	—	
	F	>2.50~250.00			—		—	
1050	O	>0.20~0.30	60~100	—	15	—	0t	
		>0.30~0.80			20	—	0t	
		>0.80~1.50		20	25	—	0t	
		>1.50~6.00			30	—	0t	
		>6.00~50.00			28	28	—	
	H12 H22	>0.20~0.30	80~120	—	2	—	0t	
		>0.30~0.50			3	—	0t	
		>0.50~0.80			4	—	0t	
		>0.80~1.50		60	6	—	0.5t	
		>1.50~3.00			8	—	0.5t	
		>3.00~6.00			9	—	0.5t	
	H14 H24	>0.20~0.30	95~130	—	1	—	0.5t	
		>0.30~0.50			2	—	0.5t	
		>0.50~0.80			3	—	0.5t	
		>0.80~1.50		75	4	—	1.0t	
		>1.50~3.00			5	—	1.0t	
		>3.00~6.00			6	—	1.0t	
	H16 H26	>0.20~0.50	120~150	—	1	—	2.0t	
		>0.50~0.80			85	2	—	2.0t
		>0.80~1.50		3		—	2.0t	
	1050		>1.50~4.00			4	—	2.0t
		H18	>0.20~0.50	130	—	1	—	—
			>0.50~0.80			2	—	—
			>0.80~1.50			3	—	—
>1.50~3.00			4			—	—	
H112		>4.50~6.00	85	45	10	—	—	
		>6.00~12.50	80	45	10	—	—	
		>12.50~25.00	70	35	—	16	—	
		>45.00~75.00	65	30	—	22	—	
F		>2.50~250.00			—		—	
		>0.20~0.50			20	—	0t	



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1050A	O	>0.50~1.50	>65~95	20	22	—	0t
		>1.50~3.00			26	—	0t
		>3.00~6.00			29	—	0.5t
		>6.00~12.50			35	—	—
		>12.50~50.00			—	32	—
	H12	>0.20~0.50	>85~125	65	2	—	0t
		>0.50~1.50			4	—	0t
		>1.50~3.00			5	—	0.5t
		>3.00~6.00			7	—	1.0t
	H22	>0.20~0.50	>85~125	55	4	—	0t
		>0.50~1.50			5	—	0t
		>1.50~3.00			6	—	0.5t
		>3.00~6.00			11	—	1.0t
	H14	>0.20~0.50	>105~145	85	2	—	0t
		>0.50~1.50			3	—	0.5t
		>1.50~3.00			4	—	1.0t
		>3.00~6.00			5	—	1.5t
	H24	>0.20~0.50	>105~145	75	3	—	0t
		>0.50~1.50			4	—	0.5t
		>1.50~3.00			5	—	1.0t
		>3.00~6.00			8	—	1.5t
	H16	>0.20~0.50	>120~160	100	1	—	0.5t
		>0.50~1.50			2	—	1.0t
		>1.50~4.00			3	—	1.5t
	H26	>0.20~0.50	>120~160	90	2	—	0.5t
>0.50~1.50		3			—	1.0t	
>1.50~4.00		4			—	1.5t	
1050A	H18	>0.20~0.50	140	120	1	—	1.0t
		>0.50~1.50			2	—	2.0t
		>1.50~3.00			3	—	3.0t
	H112	>4.00~12.50	75	30	20	—	—
		>12.50~75.00	70	25	—	20	—
F	>2.50~250.00	—	—	—	—	—	
	O	>0.20~0.50	60~100	—	15	—	—
		>0.50~0.80			20	—	—
		>0.80~1.50		20	25	—	—
		>1.50~6.00			30	—	—
		>6.00~10.00			28	28	—



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1045	H12 H22	>0.20~0.30	80~120	—	2	—	—
		>0.30~0.50			3	—	—
		>0.50~0.80			4	—	—
		>0.80~1.50		65	6	—	—
		>1.50~3.00			8	—	—
		>3.00~4.50			9	—	—
	H14 H24	>0.20~0.30	95~125	—	1	—	0.5t
		>0.30~0.50			2	—	—
		>0.50~0.80			3	—	—
		>0.80~1.50		75	4	—	—
		>1.50~3.00			5	—	—
		>3.00~4.50			6	—	—
	H16 H26	>0.20~0.50	120~145	—	1	—	—
		>0.50~0.80			2	—	—
		>0.80~1.50		85	3	—	—
		>1.50~4.50			4	—	—
	H18	>0.20~0.50	125	—	1	—	—
		>0.50~0.80			2	—	—
		>0.80~1.50			3	—	—
		>1.50~3.00			4	—	—
	H112	>4.50~6.50	85	45	10	—	—
		>6.50~12.50	85	45	10	—	—
		>12.50~25.00	70	35	—	16	—
	F	>2.50~250.00	—			—	—



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1100	O	>0.20~0.30	75~105	25	15	—	0t
		>0.30~0.50			17	—	0t
		>0.50~1.50			22	—	0t
		>1.50~6.00			30	—	0t
		>6.00~80.50			28	25	0t
	H12 H22	>0.20~0.50	85~130	75	3	—	0t
		>0.50~1.50			5	—	0t
		>1.50~6.00			8	—	0t
	H14 H24	>0.20~0.30	110~140	95	1	—	0t
		>0.30~0.50			2	—	0t
		>0.50~1.50			3	—	0t
		>1.50~4.00			4	—	0t
	H16 H26	>0.20~0.30	130~165	115	1	—	2t
		>0.30~0.50			2	—	2t
		>0.50~1.50			3	—	2t
		>1.50~4.00			4	—	2t
	H18	>0.20~0.50	150	—	1	—	—
		>0.50~1.50			2	—	—
		>1.50~3.00			3	—	—
	H112	>6.00~12.50	90	50	9	—	—
		>12.50~40.00	85	40	—	12	—
		>40.00~80.00	80	30	—	18	—
	F	>2.50~250.00	—			—	—

1200	O H111	>0.20~0.50	78~105	25	19	—	0t
		>0.50~1.50			21	—	0t
		>1.50~3.00			24	—	0t
		>3.00~6.00			28	—	0.5t
		>6.00~12.50			33	—	1.0t
		>12.50~50.00				30	—
	H12	>0.20~0.50	95~135	75	2	—	0t
		>0.50~1.50			4	—	0t
		>1.50~3.00			5	—	0.5t
		>3.00~6.00			6	—	1.0t
	H14	>0.20~0.50	115~155	95	2	—	0t
		>0.50~1.50			3	—	0.5t
		>1.50~3.00			4	—	1.0t
		>3.00~6.00			5	—	1.5t
	H16	>0.20~0.50	130~170	115	1	—	0.5t
		>0.50~1.50			2	—	1.0t
		>1.50~4.00			3	—	1.5t
	H18	>0.20~0.50	150	130	1	—	1.0t
		>0.50~1.50			2	—	2.0t
		>1.50~4.00			2	—	3.0t
	H22	>0.20~0.50	95~135	65	4	—	0t
		>0.50~1.50			5	—	0t
		>1.50~3.00			6	—	0.5t
		>3.00~6.00			10	—	1.0t
	H24	>0.20~0.50	115~155	90	3	—	0t
		>0.50~1.50			4	—	0t
		>1.50~3.00			5	—	0.5t
>3.00~6.00		7			—	1.0t	
H26	>0.20~0.50	130~170	105	2	—	0.5t	
	>0.50~1.50			3	—	1.0t	
	>1.50~4.00			4	—	1.5t	
H112	>6.00~12.50	85	35	16	—	—	
	>12.50~80.00	80	30		16	—	
F	>2.50~250.00		—			—	
3003	O	>0.20~0.50	95~140	35	15	—	0t
		>0.50~1.50			17	—	0t
		>1.50~3.00			20	—	0t
		>3.00~6.00			23	—	1.0t
		>6.00~12.50			24	—	1.5t
		>12.50~50.00			—	23	—

H12	>0.20~0.50	120~160	90	3	—	0t
	>0.50~1.50			4	—	0.5t
	>1.50~3.00			5	—	1.0t
	>3.00~6.00			6	—	1.0t
H14	>0.20~0.50	145~195	125	2	—	0t
	>0.50~1.50			2	—	0.5t
	>1.50~3.00			3	—	1.0t
	>3.00~6.00			4	—	1.5t
H16	>0.20~0.50	170~210	150	1	—	1.0t
	>0.50~1.50			2	—	1.5t
	>1.50~4.00			2	—	2.0t
H18	>0.20~0.50	190	170	1	—	1.5t
	>0.50~1.50			2	—	2.5t
	>1.50~4.00			2	—	3.0t
H22	>0.20~0.50	120~160	80	6	—	0t
	>0.50~1.50			7	—	0.5t
	>1.50~3.00			8	—	1.0t
	>3.00~6.00			9	—	1.0t
H24	>0.20~0.50	145~195	115	4	—	0.5t
	>0.50~1.50			4	—	1.0t
	>1.50~3.00			5	—	1.0t
	>3.00~6.00			6	—	2.0t
H26	>0.20~0.50	170~210	140	2	—	1.0t
	>0.50~1.50			3	—	1.5t
	>1.50~4.00			3	—	2.0t
H28	>0.20~0.50	190	160	2	—	1.5t
	>0.50~1.50			2	—	2.5t
	>1.50~3.00			3	—	3.0t
H112	>6.00~12.50	115	70	10	—	—
	>12.50~80.00	100	40	—	18	—
F	>2.50~250.00					

3004 3104	O H111	>0.20~0.50	155~200	60	13	—	0t
		>0.50~1.50			14	—	0t
		>1.50~3.00			15	—	0t
		>3.00~6.00			16	—	1.0t
		>6.00~12.50			16	—	2.0t
		>12.50~50.00			—	14	—
H12	>0.20~0.50	190~240	155	2	—	0t	
	>0.50~1.50			3	—	0.5t	
		>1.50~3.00			4	—	1.0t
		>3.00~6.00			5	—	1.5t
		>0.20~0.50			1	—	0.5t

	H14	>0.50~1.50	220~265	180	2	—	1.0t
		>1.50~3.00			2	—	1.5t
		>3.00~6.00			3	—	2.0t
	H16	>0.20~0.50	240~285	200	1	—	1.0t
		>0.50~1.50			1	—	1.5t
		>1.50~3.00			2	—	2.5t
	H18	>0.20~0.50	260	230	1	—	1.5t
		>0.50~1.50			1	—	2.5t
		>1.50~3.00			2	—	
	H22H32	>0.20~0.50	190~240	145	4	—	0t
		>0.50~1.50			5	—	0.5t
		>1.50~3.00			6	—	1.0t
>3.00~6.00		7			—	1.5t	
H24H34	>0.20~0.50	220~265	170	3	—	0.5t	
	>0.50~1.50			4	—	1.0t	
	>1.50~3.00			4	—	1.5t	
H26H36	>0.20~0.50	240~285	190	3	—	1.0t	
	>0.50~1.50			3	—	1.5t	
	>1.50~3.00			3	—	2.5t	
H28H38	>0.20~0.50	260	220	2	—	1.5t	
	>0.50~1.50			3	—	2.5t	
H112	>6.00~12.50	160	60	7	—	—	
	>12.50~40.00			—	6	—	
	>40.00~80.00			—	6	—	
F	>2.50~250.00			—		—	
3005	O H111	>0.20~0.50	115~165	45	12	—	0t
		>0.50~1.50			14	—	0t
		>1.50~3.00			16	—	0.5t
		>3.00~6.00			19	—	1.0t
	H12	>0.20~0.50	145~195	125	3	—	0t
		>0.50~1.50			4	—	0.5t
		>1.50~3.00			4	—	1.0t
		>3.00~6.00			5	—	1.5t
	H14	>0.20~0.50	170~215	150	1	—	0.5t
		>0.50~1.50			2	—	1.0t
		>1.50~3.00			2	—	1.5t
		>3.00~6.00			3	—	2.0t
H16	>0.20~0.50	195~240	175	1	—	1.0t	
	>0.50~1.50			2	—	1.5t	
	>1.50~4.00			2	—	2.5t	
	>0.20~0.50			1	—	1.5t	

	H18	>0.50~1.50	220	200	2	—	2.5t
		>1.50~3.00			2	—	—
	H22	>0.20~0.50	145~195	110	5	—	0t
		>0.50~1.50			5	—	0.5t
		>1.50~3.00			6	—	1.0t
		>3.00~6.00			7	—	1.5t
	H25	>0.20~0.50	170~215	130	4	—	0.5t
		>0.50~1.50			4	—	1.0t
		>1.50~3.00			4	—	1.5t
	H26	>0.20~0.50	195~240	160	3	—	1.0t
		>0.50~1.50			3	—	1.5t
		>1.50~3.00			3	—	1.5t
H28	>0.20~0.50	220	190	2	—	1.5t	
	>0.50~1.50			2	—	2.5t	
	>1.50~3.00			3	—	—	
3105	O H111	>0.20~0.50	100~155	40	14	—	0t
		>0.50~1.50			15	—	0t
		>1.50~3.00			17	—	0.5t
	H12	>0.20~0.50	130~180	105	3	—	1.5t
		>0.50~1.50			4	—	1.5t
		>1.50~3.00			4	—	1.5t
	H14	>0.20~0.50	150~200	130	2	—	2.5t
		>0.50~1.50			2	—	2.5t
		>1.50~3.00			2	—	2.5t
	H16	>0.20~0.50	175~225	160	1	—	—
		>0.50~1.50			2	—	—
		>1.50~3.00			2	—	—
	H18	>0.20~3.00	190	180	1	—	—
	H22	>0.20~0.50	130~180	105	6	—	—
		>0.50~1.50			6	—	—
>1.50~3.00		7			—	—	
H24	>0.20~0.50	150~200	150	4	—	2.5t	
	>0.50~1.50			4	—	2.5t	
	>1.50~3.00			5	—	2.5t	
H26	>0.20~0.50	175~225	150	3	—	—	
	>0.50~1.50			3	—	—	

		>1.50~3.00			3	—	—
	H28	>0.20~2.50	195	170	3	—	—
3102	H18	>0.20~0.50	160	—	3	—	—
		>0.50~3.00			2	—	—
5182	O H111	>0.20~0.50	255~315	110	11	—	1.0t
		>0.50~1.50			12	—	1.0t
		>1.50~3.00			13	—	1.0t
	H19	>0.20~0.50	380	320	1	—	—
		>0.50~1.50			1	—	—

5A03	O	>0.50~4.50	195	100	16	—	—
	H14、 H24、H34	>0.50~4.50	255	195	8	—	—
	H112	>4.50~10.00	185	80	16	—	—
		>10.00~12.50	175	70	13	—	—
		>12.50~25.00	175	70	—	13	—
		>25.00~50.00	165	60	—	12	—
	F	>4.50~250.00	—				—
5A05	O	>0.50~4.50	275	145	16	—	—
	H112	>4.50~10.00	275	125	16	—	—
		>10.00~12.50	265	115	14	—	—
		>12.50~25.00	265	115	—	14	—
		>25.00~50.00	255	105	—	13	—
	F	>4.50~250.00	—				—
5A06	O	>0.50~4.50	315	155	16	—	—
	H112	>4.50~10.00	315	155	16	—	—
		>10.00~12.50	305	145	12	—	—
		>12.50~25.00	305	145	—	12	—
		>25.00~50.00	295	135	—	6	—
	F	>4.50~250.00	—				—
5082	H18、H38	>0.20~0.50	335	—	1	—	—
	H19、H39	>0.20~0.50	355	—	1	—	—
	F	>4.50~250.00	—				—
5005	O	>0.20~0.50	133~145	35	15	—	0t
		>0.50~1.50			19	—	0t
		>1.50~3.00			20	—	0t

	H111	>3.00~6.00			22	—	1.0t	
		>6.00~12.50			24	—	1.5t	
		>12.50~50.00			—	20	—	
5005	H12	>0.20~0.50	125~165	95	2	—	0t	
		>0.50~1.50			2	—	0.5t	
		>1.50~3.00			4	—	1.0t	
		>3.00~6.00			5	—	1.0t	
	H14	>0.20~0.50	145~185	120	2	—	0.5t	
		>0.50~1.50			2	—	1.0t	
		>1.50~3.00			2	—	1.0t	
		>3.00~6.00			3	—	2.0t	
	H16	>0.20~0.50	165~205	145	1	—	1.0t	
		>0.50~1.50			2	—	1.5t	
		>1.50~3.00			3	—	2.0t	
		>3.00~4.00			3	—	2.5t	
	H18	>0.20~0.50	185	165	1	—	1.5t	
		>0.50~1.50			2	—	2.5t	
		>1.50~3.00			2	—	3.0t	
	H22 H32	>0.20~0.50	125~165	80	4	—	0t	
		>0.50~1.50			5	—	0.5t	
		>1.50~3.00			6	—	1.0t	
		>3.00~6.00			8	—	1.0t	
	H24 H34	>0.20~0.50	145~185	110	3	—	0.5t	
		>0.50~1.50			4	—	1.0t	
		>1.50~3.00			5	—	1.0t	
		>3.00~6.00			6	—	2.0t	
	H26 H36	>0.20~0.50	165~205	135	2	—	1.0t	
		>0.50~1.50			3	—	1.5t	
		>1.50~3.00			4	—	2.0t	
		>3.00~4.00			4	—	2.5t	
	H28	>0.20~0.50	185	160	1	—	1.5t	
	>0.50~1.50			2		2.5t		
	>1.50~3.00			3		3.0t		
	H112	>6.00~12.50	115	—	8	—	—	
		>12.50~40.00	105	—	—	10	—	
		>40.00~80.00	100	—	—	16	—	
	F	>3.50~250.00	—				—	
	O	>0.20~0.50			12	—	0t	—
		>0.50~1.50			14	—	0.5t	
		>1.50~3.00			16	—	1.0t	52

5754	H111	>3.00~6.00	190~240	80	18	—	1.0t	52	
		>6.00~12.50			18	—	2.0t	52	
		>12.50~100.00			—	12	—	52	
	H112	>6.00~12.50	190	100	12	—	—	62	
		>12.50~25.00		90	—	10	—	58	
		>25.00~40.00		80	—	12	—	52	
		>40.00~80.00		—	14	—	52		
	H12	>0.20~0.50	220~270	170	4	—	—	66	
		>0.50~1.50			5	—	—	66	
		>1.50~3.00			6	—	—	66	
		>3.00~6.00			7	—	—	66	
	H14	>0.20~0.50	240~280	190	2	—	—	72	
		>0.50~1.50			3	—	—	72	
		>1.50~3.00			4	—	—	72	
		>3.00~6.00			4	—	—	72	
	H16	>0.20~0.50	265~305	220	2	—	—	80	
		>0.50~1.50			3	—	—	80	
		>1.50~3.00			3	—	—	8080	
		>3.00~6.00			3	—	—	80	
	H18	>0.20~0.50	290	250	1	—	—	88	
		>0.50~1.50			2	—	—	88	
		>1.50~3.00			2	—	—	88	
	H22	>0.20~0.50	220~270	130	7	—	0.5t	63	
		>0.50~1.50			8	—	1.0t	63	
	H32	>1.50~3.00			10	—	1.5t	63	
		>3.00~6.00			11	—	1.5t	63	
	H24	>0.20~0.50	240~280	160	6	—	1.0t	70	
		>0.50~1.50			6	—	1.5t	70	
	H34	>1.50~3.00			7	—	2.0t	70	
	H26	>0.20~0.50	265~305	300	4	—	1.0t	78	
		>0.50~1.50			4	—	2.0t	78	
		H36			>1.50~3.00	5	—	3.0t	78
					>3.00~6.00	6	—	3.5t	78
H28	>0.20~0.50	290	230	3	—	—	87		
	>0.50~1.50			3	—	—	87		
	>1.50~3.00			4	—	—	87		
		>0.20~0.50			12	—	0t		
		>0.50~1.50			14	—	0t		

5052	O H111	>1.50~3.00	170~215	65	16	—	0.5t
		>3.00~6.00			18	—	1.0t
		>6.00~12.50			19	—	2.0t
		>12.50~50.00			—	18	—
	H12	>0.20~0.50	210~260	160	4	—	—
		>0.50~1.50			5	—	—
		>1.50~3.00			6	—	—
		>3.00~6.00			8	—	—
	H14	>0.20~0.50	230~280	180	3	—	—
		>0.50~1.50			3	—	—
		>1.50~3.00			4	—	—
		>3.00~6.00			4	—	—
	H16	>0.20~0.50	250~300	210	2	—	—
		>0.50~1.50			3	—	—
		>1.50~3.00			3	—	—
		>3.00~4.00			3	—	—
	H18	>0.20~0.50	270	240	1	—	—
		>0.50~1.50			2	—	—
		>1.50~3.00			2	—	—
	H22	>0.20~0.50	210~260	130	5	—	0.5t
		>0.50~1.50			6	—	1.0t
	H32	>1.50~3.00			7	—	1.5t
		>3.00~6.00			10	—	1.5t
	H24	>0.20~0.50	230~280	150	4	—	0.5t
		>0.50~1.50			5	—	1.5t
	H34	>1.50~3.00			6	—	2.0t
		>3.00~6.00			7	—	2.5t
	H26H36	>0.20~0.50	250~300	180	3	—	1.5t
>0.50~1.50		4			—	2.0t	
>1.50~3.00		5			—	3.0t	
>3.00~4.00		6			—	3.5t	
H38	>0.20~0.50	270	210	3	—	—	
	>0.50~1.50			3	—	—	
	>1.50~3.00			4	—	—	
H112	>6.00~12.50	190	80	7	—	—	
	>12.50~40.00	170	70	—	10	—	
	>40.00~80.00	170	70	—	14	—	
F	>3.50~250.0	—				—	
O	>0.20~0.50	275~350	125	11	—	0.5t	
	>0.50~1.50			12	—	1.0t	
	>1.50~3.00			13	—	1.0t	
	>3.00~6.00			15	—	1.5t	
	>6.00~12.50			16	—	2.5t	

5083	H111	>12.50~50.00			—	15	—			
		>50.00~80.00			—	14	—			
	H12	>0.20~0.50			315~375	250	3	—	—	
		>0.50~1.50					4	—	—	
		>1.50~3.00					5	—	—	
		>3.00~6.00					6	—	—	
	H14	>0.20~0.50			340~400	280	2	—	—	
		>0.50~1.50					3	—	—	
		>1.50~3.00					3	—	—	
		>3.00~6.00					3	—	—	
	H16	>0.20~0.50			360~420	300	1	—	—	
		>0.50~1.50					2	—	—	
		>1.50~3.00					2	—	—	
		>3.00~4.00					2	—	—	
	H22	>0.20~0.50			305~380	215	5	—	0.5t	
		>0.50~1.50					6	—	1.5t	
	H32	>1.50~3.00					7	—	2.0t	
		>3.00~6.00					8	—	2.5t	
	H24	>0.20~0.50			340~400	250	4	—	1.0t	
		>0.50~1.50					5	—	2.0t	
	H34	>1.50~3.00					6	—	2.5t	
		>3.00~6.00					7	—	3.5t	
	H26	>0.20~0.50			360~420	280	2	—	—	
		>0.50~1.50					3	—	—	
	H36	>1.50~3.00					3	—	—	
		>3.00~4.00					3	—	—	
	H112	>6.00~12.50			275	125	12	—	—	
		>12.50~40.00			275	125	—	10	—	
		>40.00~50.00			270	115	—	10	—	
	F	>4.50~250.0			—			—	—	
	O	H111			>0.20~0.50	240~310	100	11	—	0.5t
					>0.50~1.50			12	—	1.0t
					>1.50~3.00			13	—	1.0t
>3.00~6.00			15	—	1.5t					
>6.00~12.50			17	—	2.5t					
>12.50~80.00			—	16	—					
H12	>0.20~0.50	275~335	200	3	—	—				
	>0.50~1.50			4	—	—				
	>1.50~3.00			5	—	—				
	>3.00~6.00			6	—	—				
H14	>0.20~0.50	300~360	240	2	—	—				
	>0.50~1.50			3	—	—				
	>1.50~3.00			3	—	—				

5086	H16	>3.00~6.00	325~385	270	3	—	—
		>0.20~0.50			1	—	—
		>0.50~1.50			2	—	—
		>1.50~3.00			2	—	—
		>3.00~4.00			2	—	—
	H18	>0.20~0.50	325~385	290	1	—	—
		>0.50~1.50			1	—	—
		>1.50~3.00			1	—	—
	H22	>0.20~0.50	275~335	185	5	—	0.5t
		>0.50~1.50			6	—	1.5t
	H32	>1.50~3.00			7	—	2.0t
		>3.00~6.00			8	—	2.5t
	H24	>0.20~0.50	330~360	220	4	—	1.5t
		>0.50~1.50			5	—	2.0t
	H34	>1.50~3.00			6	—	2.5t
		>3.00~6.00			7	—	3.5t
	H26	>0.20~0.50	325~385	250	2	—	—
		>0.50~1.50			3	—	—
	H36	>1.50~3.00			3	—	—
		>3.00~4.00			3	—	—
H112	>6.00~12.50	250	105	8	—	—	
	>12.50~40.00	240	105	—	9	—	
	>40.00~50.00	240	100	—	12	—	
F	>4.50~250.0	—		—		—	
6061	O	>0.40~1.50	≤150	≤85	14	—	0.5t
		>1.50~3.00			16	—	1.0t
		>3.00~6.00			19	—	1.0t
		>6.00~12.50			16	—	2.0t
		>12.50~25.00			—	16	—
	F	>3.50~250.0	—		—		—
6063	O	>0.50~5.00	≤130	—	20	—	—
		>5.00~12.50			15	—	—
		>12.50~20.00			—	15	—
6A02	O	>0.50~4.50	≤145	—	21	—	—
		>4.50~10.00			16	—	—
	F	>3.50~250.0	—		—		—
6082	O	>0.40~1.50	≤150	≤85	14	—	0.5t
		>1.50~3.00			16	—	1.0t
		>3.00~6.00			18	—	1.5t
		>6.00~12.50			17	—	2.5t
		>12.50~25.00			—	16	—
	F	>3.50~250.0	—		—		—

8A06	O	>0.20~0.30	≤110	—	16	—	—
		>0.30~0.50			21	—	—
		>0.50~0.80			26	—	—
		>0.80~10.00			30	—	—
	F	>3.50~250.0	—			—	—
8011A	O H111	>0.20~0.50	80~130	30	19	—	—
		>0.50~1.50			21	—	—
		>1.50~3.00			24	—	—
	H14	>0.20~0.50	125~165	110	2	—	—
		>0.50~3.00			3	—	—
	H24	>0.20~0.50	125~165	100	3	—	—
		>0.50~1.50			4	—	—
		>1.50~3.00			5	—	—
	H18	>0.20~0.50	165	145	1	—	—
		>0.50~3.00			2	—	—