Aluminium

Aluminium is the world's most abundant metal and is the third most common element comprising 8% of the earth's crust. Its incredible versatility makes aluminium the most widely used metal after steel, with world production around 20 million tonnes per annum. The versatility stems from a unique combination of properties that combine lightness, strength, durability and corrosion resistance with good thermal and electrical conductivity. A wide range of alloys is available to exploit these properties to the full.

Aalco stocks all of the commonly required forms of aluminium including sheet, coil, strip, plate, shate, treadplate, patterned sheet, tube, bar, sections and free-machining rod. In addition to a comprehensive range of standard shapes and sizes, Aalco branches stock industry specific items and customer specials with numerous specialist products and alloys satisfying the needs of a broad range of industries. Aalco also provides a complete range of processing services spanning: bar, tube & pipe cutting; plate processing; coil processing and surface finishing.

All products supplied conform to the relevant EN/BS, ISO standards.

ALUMINIUM EXTRUSIONS

Round Bar

Dia (in)	Weight per metre (Kg)
¼	0.09
5/16	0.13
⅜	0.19
7/16	0.26
½	0.34
9/16	0.43
⅝	0.54
16mm	0.54
11/16	0.65
¾	0.77
20mm	0.85
13/16	0.91
⅞	1.05
1	1.37
1⅛	1.74
1¼	2.15
1 5/16	2.37
1⅜	2.60
35mm	2.61
1 1/16	2.84
1½	3.09
1⅝	3.63
1¾	4.21
1⅞	4.83
2	5.49
2⅛	6.20
2¼	6.95
2⅜	7.75
2½	8.58

Dia (in)	Weight per metre (Kg)
2⅝	9.46
2¾	10.4
3	12.4
3¼	14.5
3½	16.8
3¾	19.3
4	22.0
4¼	24.8
4½	27.8
4¾	31.0
5	34.3
5¼	37.8
5½	41.5
5¾	45.4
6	49.4
6½	58.0
7	67.3
7¼	72.2
7½	77.2
8	87.9
8½	99.2
9	111
9½	124
10	137
12	198
13	232
14	269
15	309
16	352

Machining

We stock aluminium round bar in three machining alloys:

Alloy 6082 T6 Machines well and, with chip breakers, produces swarf in short tight coils.

Alloy 2011 T3/T6 Often referred to as 'FMA' (Free Machining Alloy), this is produced especially for use on automatic lathes. It offers exceptional machinability at high speeds and forms fine chips which are easily removed. It is particularly suitable for components with complex, detailed or extensive machining and can often replace 'free machining brass' without tool changes.

Alloy 6262 T9 This may be used in place of Alloy 2011 in applications requiring higher corrosion resistance and better anodising response. It has excellent machinability and surface finishing characteristics.

Square Bar Alloy 6082-T6

Size (in)	Weight per metre (Kg)
¼	0.11
5/16	0.17
⅜	0.25
½	0.44
⅝	0.68
¾	0.98
⅞	1.34
1	1.75

Size (in)	Weight per metre (Kg)
1¼	2.73
1½	3.93
1¾	5.35
2	6.99
2½	10.9
3	15.7
3½	21.4
4	28.0

ALUMINIUM EXTRUSIONS

Box Section Square 6063-T6 or 6082-T6

Size (in)	Weight per metre (Kg)
½ x ½ x 16 swg	0.20
¾ x ¾ x 16 swg	0.31
1 x 1 x 16 swg	0.42
1 x 1 x 10 swg	0.78
1¼ x 1¼ x16 swg	0.53
1¼ x 1¼ x10 swg	1.00

Size (in)	Weight per metre (Kg)
1½ x 1½ x16 swg	0.64
1½ x 1½ x10 swg	1.23
1¾ x 1¾ x10 swg	1.45
2 x 2 x16 swg	0.87
2 x 2 x 10 swg	1.68

Size (in)	Weight per metre (Kg)
2 x 2 x ¼	3.06
2½ x 2½ x10 swg	2.12
3 x 3 x10 swg	2.57
4 x 4 x10 swg	3.47
4 x 4 x ¼	6.56

Box Section Rectangular Alloy 6063-T6 or 6082-T6

Size (in)	Weight per metre (Kg)
1½ x ¾ x16 swg	0.48
1½ x 1 x 1/16	0.52
1½ x 1 x10 swg	1.00
2 x 1 x10 swg	1.22
2 x 1½ x10 swg	1.34

Size (in)	Weight per metre (Kg)
3 x 1 x10 swg	1.67
3 x 1½ x10 swg	1.90
3 x 1¾ x10 swg	2.01
3 x 2 x10 swg	2.11
4 x 1 x10 swg	2.12

Size (in)	Weight per metre (Kg)
4 x 1¾ x10 swg	2.45
4 x 2 x10 swg	2.56
6 x 2 x10 swg	3.40
6 x 3 x ⅜	10.8

Channel Available in one or more of the following alloys 6082-T6, 6063-T6, 6063A-T6

Size (in)	Weight per metre (Kg)
⅜ x ⅜ x 1/16	0.11
½ x ½ x 1/16	0.14
½ x ½ x ⅛	0.27
⅝ x ⅝ x 1/16	0.19
⅝ x ⅝ x ⅛	0.36
¾ x ½ x ⅛	0.44
¾ x ¾ x 1/16	0.24
¾ x ¾ x ⅛	0.49
⅞ x ⅞ x ⅛	0.52
1 x ½ x ⅛	0.38
1 x ¾ x ⅛	0.49
1 x 1 x 1/16	0.31
1 x 1 x ⅛	0.60
1 x 1 x 3/16	0.86
1 x 1 x ¼	1.10
1⅛ x 1⅛ x ⅛	0.68
1¼ x ½ x ⅛	0.44
1¼ x ¾ x ⅛	0.55
1¼ x 1 x ⅛	0.66
1¼ x 1¼ x 1/16	0.39
1¼ x 1¼ x ⅛	0.76

Size (in)	Weight per metre (Kg)
1¼ x 1¼ x 3/16	1.10
1¼ x 1¼ x ¼	1.41
1½ x ½ x ⅛	0.49
1½ x ¾ x ⅛	0.60
1½ x 1 x ⅛	0.71
1½ x 1½ x 1/16	0.49
1½ x 1½ x ⅛	0.98
1½ x 1½ x 3/16	1.36
1½ x 1½ x ¼	1.74
1¾ x 1 x ⅛	0.76
1¾ x 1¾ x ⅛	1.09
1¾ x 1¾ x ¼	2.07
2 x ½ x ⅛	0.60
2 x ¾ x ⅛	0.71
2 x 1 x ⅛	0.82
2 x 1 x 3/16	1.22
2 x 1 x ¼	1.52
2 x 1½ x ⅛	1.03
2 x 1½ x ¼	1.97
2 x 2 x 1/16	0.64
2 x 2 x ⅛	1.26

Size (in)	Weight per metre (Kg)
2 x 2 x 3/16	1.83
2 x 2 x ¼	2.40
2¼ x 1¼ x 3/16	1.43
2½ x 1 x ⅛	0.93
2½ x 1¼ x 3/16	1.52
3 x 1 x ⅛	1.04
3 x 1½ x ⅛	1.26
3 x 1½ x 3/16	1.84
3 x 1½ x ¼ x 5/16	2.66
3 x 2 x ⅛	1.48
3 x 2 x 3/16	2.17
3 x 2 x ¼	2.84
3½ x 1½ x ¼ x 5/16	2.90
4 x 2 x ⅛	1.69
4 x 2 x ¼ x 5/16	3.66
5 x 2 x ¼ x 5/16	4.24
6 x 2 x ¼ x 5/16	4.53
6 x 3 x ¼ x ⅜	6.23
6 x 3 x ⅜ x ½	9.78
8 x 3 x ⅜ x ½	11.5

Dimensions are in the order: base x leg x base thickness x leg thickness

ALUMINIUM EXTRUSIONS

Tee Section Alloy 6082-T6 or 6063A-T6

Size (in)	Weight per metre (Kg)
¾ x ¾ x ⅛	0.30
1 x 1 x ⅛	0.41
1¼ x 1¼ x ⅛	0.52
1½ x 1½ x ⅛	0.63
1½ x 1½ x ³⁄₁₆	0.92
1½ x 1½ x ¼	1.20
2 x 1 x ⅛	0.63
2 x 2 x ⅛	0.85
2 x 2 x ³⁄₁₆	1.25
2 x 2 x ¼	1.64
3 x 3 x ¼	2.51

Dimensions are in the order: cross piece x upright x thickness

Equal Angle Available in one or more of the following alloys 6082-T6, 6063-T6, 6063A-T6

Size (in)	Weight per metre (Kg)
½ x ½ x ¹⁄₁₆	0.10
½ x ½ x ⅛	0.19
⅝ x ⅝ x ¹⁄₁₆	0.13
⅝ x ⅝ x ⅛	0.25
¾ x ¾ x ¹⁄₁₆	0.16
¾ x ¾ x ⅛	0.30
⅞ x ⅞ x ⅛	0.36
1 x 1 x ¹⁄₁₆	0.21
1 x 1 x ⅛	0.41
1 x 1 x ³⁄₁₆	0.59
1 x 1 x ¼	0.76
1¼ x 1¼ x ¹⁄₁₆	0.27
1¼ x 1¼ x ⅛	0.52
1¼ x 1¼ x ³⁄₁₆	0.76
1¼ x 1¼ x ¼	0.98
1½ x 1½ x ¹⁄₁₆	0.32
1½ x 1½ x ⅛	0.63
1½ x 1½ x ³⁄₁₆	0.92
1½ x 1½ x ¼	1.20
1¾ x 1¾ x ⅛	0.74
1¾ x 1¾ x ³⁄₁₆	1.09
1¾ x 1¾ x ¼	1.42
2 x 2 x ¹⁄₁₆	0.43
2 x 2 x ⅛	0.85
2 x 2 x ³⁄₁₆	1.25
2 x 2 x ¼	1.64
2 x 2 x ⅜	2.38
2½ x 2½ x ⅛	1.06
2½ x 2½ x ³⁄₁₆	1.58
2½ x 2½ x ¼	2.08
3 x 3 x ⅛	1.28
3 x 3 x ³⁄₁₆	1.91
3 x 3 x ¼	2.51
3 x 3 x ⅜	3.69
4 x 4 x ¼	3.39
4 x 4 x ⅜	5.00
6 x 6 x ½	10.0

Unequal Angle Available in one or more of the following alloys 6082-T6, 6063-T6, 6063A-T6

Size (in)	Weight per metre (Kg)
¾ x ½ x ¹⁄₁₆	0.13
¾ x ½ x ⅛	0.25
1 x ½ x ¹⁄₁₆	0.15
1 x ½ x ⅛	0.30
1 x ⅝ x ⅛	0.33
1 x ¾ x ¹⁄₁₆	0.18
1 x ¾ x ⅛	0.36
1¼ x ½ x ⅛	0.36
1¼ x ¾ x ⅛	0.41
1¼ x 1 x ⅛	0.47
1½ x ½ x ⅛	0.41
1½ x ¾ x ⅛	0.46
1½ x 1 x ⅛	0.52
1¾ x ¾ x ⅛	0.52
1¾ x 1 x ⅛	0.57
2 x ½ x ⅛	0.52
2 x ¾ x ⅛	0.57
2 x 1 x ⅛	0.63
2 x 1 x ³⁄₁₆	0.92
2 x 1 x ¼	1.20
2 x 1½ x ⅛	0.74
2 x 1½ x ³⁄₁₆	1.09
2 x 1½ x ¼	1.42
2½ x 1 x ⅛	0.73
2½ x 1½ x ⅛	0.85
2½ x 1½ x ³⁄₁₆	1.25
2½ x 1½ x ¼	1.64
3 x 1 x ⅛	0.85
3 x 1 x ¼	1.64
3 x 1½ x ⅛	0.96
3 x 1½ x ³⁄₁₆	1.40
3 x 1½ x ¼	1.86
3 x 2 x ⅛	1.07
3 x 2 x ³⁄₁₆	1.58
3 x 2 x ¼	2.08
4 x 1 x ⅛	1.06
4 x 2 x ⅛	1.28
4 x 2 x ¼	2.51
4 x 3 x ¼	2.95
6 x 3 x ⅜	5.63

ALUMINIUM EXTRUSIONS

Flat Bar Alloy 6082-T6 or 6063-T6/6063A-T6

Size (in)	Weight per metre (Kg)
⅜ x ¼	0.16
½ x ⅛	0.11
½ x 3/16	0.16
½ x ¼	0.22
½ x ⅜	0.33
⅝ x ⅛	0.14
⅝ x 3/16	0.20
⅝ x ¼	0.27
⅝ x ⅜	0.41
⅝ x ½	0.55
¾ x 1/16	0.08
¾ x ⅛	0.16
¾ x 3/16	0.25
¾ x ¼	0.33
¾ x ⅜	0.49
¾ x ½	0.66
¾ x ⅝	0.82
⅞ x ⅛	0.19
1 x 1/16	0.11
1 x ⅛	0.22
1 x 3/16	0.33
1 x ¼	0.44
1 x 5/16	0.54
1 x ⅜	0.66
1 x ½	0.87
1 x ⅝	1.09
1 x ¾	1.31
1¼ x ⅛	0.27
1¼ x 3/16	0.41
1¼ x ¼	0.55
1¼ x ⅜	0.82
1¼ x ½	1.09

Size (in)	Weight per metre (Kg)
1¼ x ⅝	1.37
1¼ x ¾	1.64
1¼ x 1	2.19
1½ x ⅛	0.33
1½ x 3/16	0.49
1½ x ¼	0.66
1½ x ⅜	0.98
1½ x ½	1.31
1½ x ⅝	1.64
1½ x ¾	1.97
1½ x 1	2.62
1½ x 1¼	3.28
1¾ x ¼	0.76
1¾ x ⅜	1.15
1¾ x ½	1.53
1¾ x ¾	2.29
1¾ x 1	3.06
1¾ x 1¼	3.82
2 x ⅛	0.44
2 x 3/16	0.66
2 x ¼	0.87
2 x ⅜	1.31
2 x ½ x	1.75
2 x	

ROLLED PRODUCTS (SHEET & PLATE)

Sheet Alloy 1050-H14 Plain or PVC coated on one side.

Size (mm)	Weight per sheet (Kg)
2000 x 1000 x 0.5	2.71
2500 x 1250 x 0.5	4.23
2000 x 1000 x 0.6	3.25
2500 x 1250 x 0.6	5.08
2000 x 1000 x 0.8	4.34
2500 x 1250 x 0.8	6.78
2000 x 1000 x 1.0	5.42
2500 x 1250 x 1.0	8.47
3000 x 1250 x 1.0	10.2
2000 x 1000 x 1.2	6.50
2500 x 1250 x 1.2	10.2
3000 x 1250 x 1.2	12.2
3000 x 1500 x 1.2	14.6

Size (mm)	Weight per sheet (Kg)
2000 x 1000 x 1.5	8.13
2500 x 1250 x 1.5	12.7
3000 x 1250 x 1.5	15.2
3000 x 1500 x 1.5	18.3
2000 x 1000 x 2.0	10.8
2500 x 1250 x 2.0	16.9
3000 x 1000 x 2.0	16.3
3000 x 1250 x 2.0	20.3
3000 x 1500 x 2.0	24.4
4000 x 1000 x 2.0	21.73
4000 x 1250 x 2.0	27.17
4000 x 1500 x 2.0	32.60
4000 x 2000 x 2.0	43.40

Size (mm)	Weight per sheet (Kg)
2000 x 1000 x 2.5	13.6
2500 x 1250 x 2.5	21.2
3000 x 1500 x 2.5	30.5
2000 x 1000 x 3.0	16.3
2500 x 1250 x 3.0	25.4
3000 x 1000 x 3.0	24.4
3000 x 1250 x 3.0	30.5
3000 x 1500 x 3.0	36.6
4000 x 1000 x 3.0	32.53
4000 x 1250 x 3.0	40.66
4000 x 1500 x 3.0	48.80
4000 x 2000 x 3.0	65.0

Sheet Other Alloys Plain or PVC coated on one side.

Size (mm)	Alloys – 5251-H22	3103-H14	4015-H12	6082-T6
2000 x 1000 x 1.0	✓			
2500 x 1250 x 1.0	✓			
2000 x 1000 x 1.2	✓	✓		
2500 x 1250 x 1.2	✓	✓	✓	
3000 x 1500 x 1.2			✓	
2000 x 1000 x 1.5	✓	✓	✓	
2500 x 1250 x 1.5	✓	✓	✓	
3000 x 1500 x 1.5	✓		✓	
2000 x 1000 x 2.0	✓	✓	✓	
2500 x 1250 x 2.0	✓	✓	✓	✓
3000 x 1250 x 2.0	✓	✓	✓	
3000 x 1500 x 2.0	✓		✓	
2000 x 1000 x 2.5	✓			
2500 x 1250 x 2.5	✓	✓	✓	
2438 x 1219 x 2.83			✓	
2000 x 1000 x 3.0	✓	✓	✓	
2500 x 1250 x 3.0	✓	✓	✓	✓
3000 x 1250 x 3.0	✓	✓	✓	
3000 x 1500 x 3.0	✓	✓	✓	

Stucco Sheet Alloy 1050-H14 Plain or PVC coated on one side.

Size (mm)	Weight per sheet (Kg)
2000 x 1000 x 0.5	2.71
2500 x 1250 x 0.5	4.23
2000 x 1000 x 0.6	3.25
2500 x 1250 x 0.6	5.08

Size (mm)	Weight per sheet (Kg)
2000 x 1000 x 0.8	4.34
2500 x 1250 x 0.8	6.78
2500 x 1250 x 1.0	8.47
2500 x 1250 x 1.2	10.2

ROLLED PRODUCTS (SHEET & PLATE)

Shate Alloy 5251-H22 *Some sizes available in Alloy 6082-T651 and/or 1050A-H14*

Size (mm)	Weight per sheet (Kg)
2000 x 1000 x 4.0	21.7
2500 x 1250 x 4.0	33.9
2000 x 1000 x 5.0	27.1

Size (mm)	Weight per sheet (Kg)
2500 x 1250 x 5.0	42.3
2000 x 1000 x 6.0	32.5
2500 x 1250 x 6.0	50.8

Plate Alloys 6082-T651, 5083-0/H111, 6082-T6

Size (mm)	Weight per plate (kg)	5083-0	6082-T651	6082-T6
2500 x 1250 x 4.0	33.90	✓		✓
2500 x 1250 x 5.0	42.34	✓		✓
2500 x 1250 x 6.0	50.78	✓		✓
2500 x 1250 x 8.0	67.81	✓	✓	
2500 x 1250 x 10.0	84.68	✓	✓	
2500 x 1250 x 12.0	101.56	✓	✓	
2500 x 1250 x 15.0	127.18	✓	✓	
2500 x 1250 x 16.0	135.62	✓	✓	
2500 x 1250 x 20.0	169.37	✓	✓	
2500 x 1250 x 25.0	211.77	✓	✓	

We have extensive in house plate sawing facilities that enable us to supply your requirements cut to size from the above stock range and also stocks of plate up to 6" thick.

Plate Alloys 6082-T651 and 5083-0/H111

Thickness	Unit weight per sq metre (Kg)
8mm	21.7
10mm	27.1
12mm	32.5
15mm	40.7
16mm	43.4
20mm	54.2
25mm	67.8
30mm	81.3

Thickness	Unit weight per sq metre (Kg)
1½"	103
40mm	108
1¾"	120
2"	138
2¼"	155
60mm	163
2½"	172
2¾"	189

Thickness	Unit weight per sq metre (Kg)
70mm	190
3"	207
80mm	217
90mm	244
4"	275
5"	344
6"	413

Whilst most plate, particularly above 12mm thick, is sold in cut pieces, we stock full plates in sizes 2500mm x 1250mm.

5 Bar Treadplate Alloy 5754-H111

Size (mm)	Weight per sheet (Kg)
2438 x 1219 x 2.0	16.8
2500 x 1250 x 2.0	17.6
3000 x 1500 x 2.0	25.3
2000 x 1000 x 3.0	16.7

Size (mm)	Weight per sheet (Kg)
2438 x 1219 x 3.0	24.8
2500 x 1250 x 3.0	26.0
3000 x 1500 x 3.0	37.5
2438 x 1219 x 4.5	37.6

Size (mm)	Weight per sheet (Kg)
2500 x 1250 x 4.5	39.5
2438 x 1219 x 6.0	50.6
2500 x 1250 x 6.0	53.2
3000 x 1500 x 6.0	76.6

Rice Grain Treadplate Alloy 5754-H111

Size (mm)	Weight per sheet (Kg)
2500 x 1250 x 1.2	11.4
2500 x 1250 x 1.5	13.9
2500 x 1250 x 2.0	18.1

Size (mm)	Weight per sheet (Kg)
2500 x 1250 x 2.5	22.4
2500 x 1250 x 3.0	26.6

SPECIAL PRODUCTS

The sizes shown for each product in this brochure are those most widely used. Many more options are available from Aalco's 10,000-item standard stock range.

In providing customers with a cost-effective single source for all their metals requirements, over 50% of Aalco sales comprise non-standard products. This covers a significant range of non-standard products as well as special items for particular industries and individual customers – in fact around 40% of the stock at individual branches falls into this category – together with a comprehensive processing service offering items cut to customer's instructions as well as finishing and coating. The full range of processing facilities is outlined on pages 2 & 3 of this brochure. In addition, Aalco regularly arranges sub-contract processing using a range of approved suppliers.

Amongst the industries served by Aalco's speciality product ranges are:

- Building – Painted Sheet & Extrusions, Patterned Sheet & Treadplate
- Road Transport – Sections, Castings, Plate & Shate, Patterned Sheet & Treadplate
- Road Signs – Sheet, Blanks, Painted Sheet, Extrusions
- Marine – Sections, Plate, Sheet, Treadplate, Transition Joints
- Aerospace – Extrusions including large sections in high strength alloys, Plate
- Holloware – Deep Drawing Quality Sheet, Circles & Rings
- Process Plant – Pipe, Butt Weld Fittings & Flanges, Treadplate

Aluminium Extrusions

Aalco are the UK's largest purchaser of aluminium extrusions with an annual spend in excess of £25 million representing around 11,000 tonnes. This gives Aalco unrivalled purchasing power and sourcing expertise, which is shared with its customers.

As a major customer of many leading extrusion mills Aalco has access to the widest possible range of alloys, shapes and sizes. In depth knowledge of each mill's particular specialities means Aalco customers are assured that their extrusions will be sourced from the most cost-effective source.

The stock range includes special alloys, shapes and sizes for many industries including building, marine, road transport, signage, leisure & sporting goods, engineering and aerospace.

A particular skill is the sourcing of bespoke extrusions, designed for individual customers – from single shapes to full suites. Many customers have found major benefits in sourcing from Aalco rather than direct from the mill.

These benefits include time saving, reduced costs, flexibility, the possibility to make regular changes in scheduled quantities, keeping abreast of technology changes, assistance with design and technical issues, all without sacrificing choice or quality. What's more Aalco's purchasing power means all this can be achieved at a very competitive price.

The processing services provided for aluminium extrusions include:

- Cut lengths – Single Pieces up to 16"/406mm diameter through to High Volume Repetition Cutting
- Prefabrication – Drilling, Notching, Punching & Bending
- Finishing – Anodising, Painting/ Power Coating, Polishing, Chromating
- Protective Coating or Sleeving
- Special Packaging including 'Kitting'

Aluminium

Aluminium can be easily formed by all the main production processes and all alloys are easily formed, welded and joined. It can be extruded into the most complex of shapes allowing screw fixings, snap fit jointing and attractive design features. It can be drawn to achieve the most exacting of tolerances and to specific levels of hardness for the most critical of applications. Then finally it can be hot or cold rolled to provide a multitude of thicknesses and widths from cooking foil to heavy plate. Aluminium can be surface rolled to give many attractive, decorative and functional patterns. These include popular patterns such as: stucco, checkmate, treadplate and many more. Aluminium responds well to a variety of finishing methods; painting and anodising are the two most popularly used. Each provides an attractive and highly durable finish. These processes can be applied either as a post manufactured operation or as an integrated part of the semis production process.

Aluminium is available in a range of alloys giving properties suitable for an ever-increasing number of applications. Major recycling programmes make a significant contribution to the preservation of the environment. Only 5% of the energy required to smelt primary metal is used when recycling, which also avoids the problems of waste disposal and dumping. Whilst contributing significantly to protecting the environment, aluminium maintains a leading position in terms of material selection by being the most cost effective solution for many industrial and consumer applications.

Aluminium Alloy Groups

1XXX	Aluminium of 99% minimum purity
2XXX	Aluminium-copper alloys
3XXX	Aluminium-manganese alloys
4XXX	Aluminium-silicon alloys
5XXX	Aluminium-magnesium alloys
6XXX	Aluminium-magnesium-silicon alloys
7XXX	Aluminium-zinc-magnesium alloys
8XXX	Miscellaneous alloys, e.g. aluminium-lithium alloys

Temper Designation for Aluminium Alloys

Alloy – F: as fabricated Alloy – O: annealed (wrought alloys)

Non-heat treatable alloys

Alloy	H1	Work-hardened only
	H2	Work-hardened and partially annealed
	H3	Work-hardened and stabilized by low temperature treatment

Alloy	HX2	Quarter-hard	Degree of cold working
	HX4	Half-hard	
	HX6	Three-quarter-hard	
	HX8	Full-hard	

Heat treatable alloys

T2	Cooled from an elevated temperature and naturally aged
T3	Solution heat-treated, cold worked and naturally aged
T4	Solution heat-treated and naturally aged
T5	Cooled from an elevated temperature shaping process and artificially aged
T6	Solution heat treated and artificially aged
T9	Solution heat-treated, artificially aged and cold worked
T651*	Solution heat treated, stress relieved by stretching and then artificially aged

* Example of 3 digit number which denotes special tempers achieved by variation treatment.

Designations & Chemical composition of selected Aluminium Alloys

Alloy Designation			Composition
Current	Previous		
AA1050A	Al 99,5	S1B	Al 99.5
AA2011	Al Cu6BiPb	FC1	Al 5.5Cu 0.4Bi 0.4Pb
AA3103	Al Mn1	NS3	Al 1.2Mn
AA4015	–		Al 2Si 1Mn FeCuMgZn
AA5083	Al Mg4,5Mn0,7	N8	Al 4.5Mg 0.7MnCr
AA5251	Al Mg2	NS4	Al 2.0Mg 0.3Mn
AA5005	Al Mg1(B)	N41	Al 0.8Mg
AA5454	Al Mg3Mn	N51	Al 2.7Mg 0.8MnCr
AA5754	Al Mg3		Al 3.1MgMnCr
AA6063	Al Mg0,7Si	HE9	Al 0.7Mg 0.4Si
AA6082	Al Si1MgMn	HE30	Al 0.9Mg 1.0Si 0.7Mn
AA6262	–		Al 1.0Mg 0.6Si Pb
AA7075	Al ZnMgCu1.5		Al 5.6Zn 2.5Mg 1.6Cu

Mechanical Properties of selected Aluminium alloys

Alloy	Temper	Proof Stress 0.20%	Tensile Strength	Shear Strength	Elongation A5	Hardness Vickers
		(MPa)	(MPa)	(MPa)	(%)	HV
AA1050A	H12	85	100	60	12	30
	H14	105	115	70	10	36
	H16	120	130	80	7	–
	H18	140	150	85	6	44
	0	35	80	50	42	20
AA2011	T3	290	365	220	15	100
	T6	300	395	235	12	115
AA3103	H14	140	155	90	9	46
	0	45	105	70	29	29
AA4015	0	45	110-150	–	20	30-40
	H12	110	135-175	–	4	45-55
	H14	135	160-200	–	3	–
	H16	155	185-225	–	2	–
	H18	180	210-250	–	2	–
AA5083	H32	240	330	185	17	95
	0/H111	145	300	175	23	75
AA5251	H22	165	210	125	14	65
	H24	190	230	135	13	70
	H26	215	255	145	9	75
	0	80	180	115	26	46
AA5754	H22	185	245	150	15	75
	H24	215	270	160	14	80
	H26	245	290	170	10	85
	0	100	215	140	25	55
AA6063	0	50	100	70	27	85
	T4	90	160	110	21	50
	T6	210	245	150	14	80
AA6082	0	60	130	85	27	35
	T4	170	260	170	19	75
	T6	310	340	210	11	100
AA6262	T6	240	290	–	8	–
	T9	330	360	–	3	–
AA7075	0	105-145	225-275	150	9	65
	T6	435-505	510-570	350	5	160