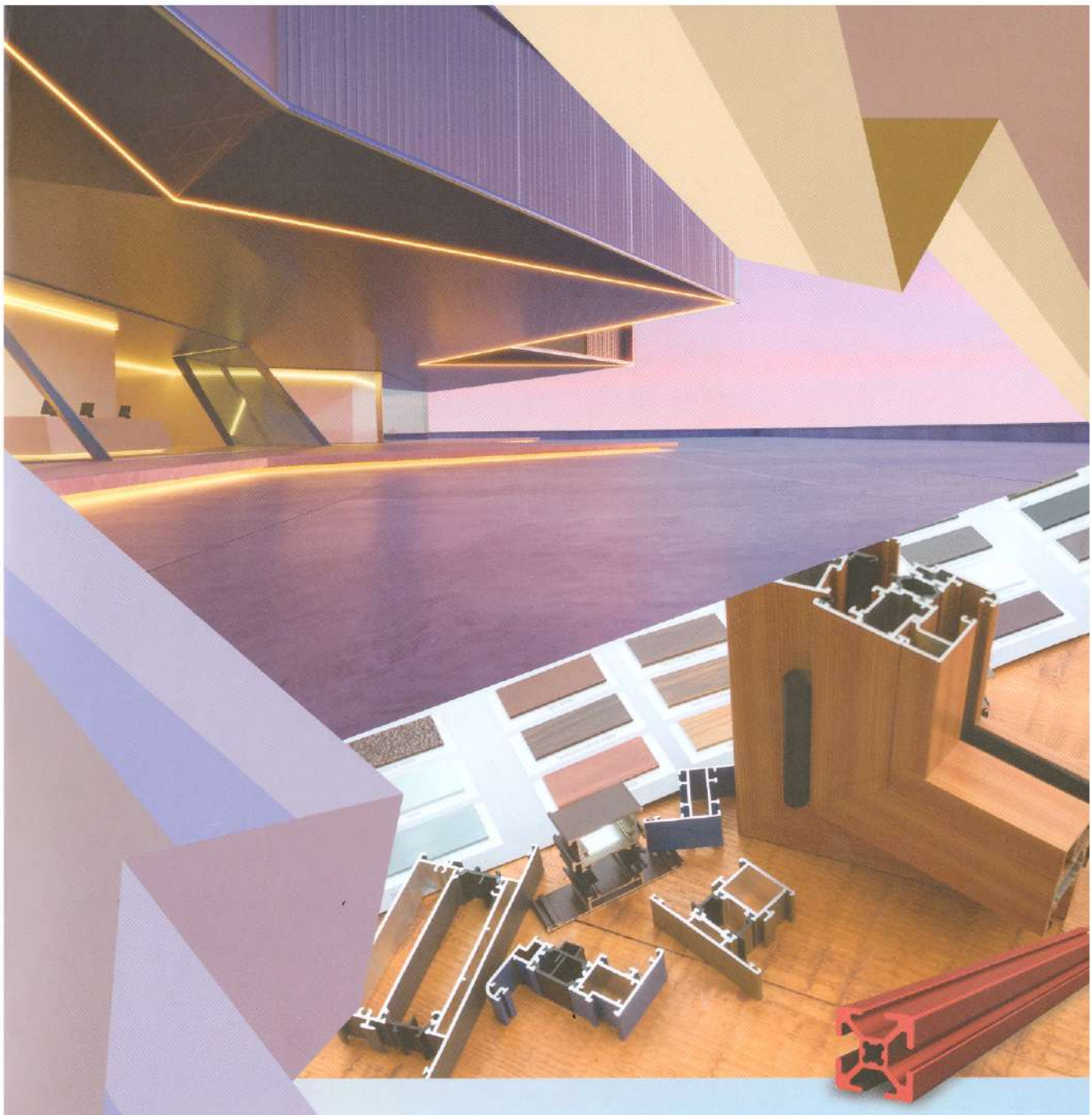

ALUMEX®

ULTIMATE IN ALUMINIUM PROFILES

COLOR GUIDE


ELEVATE
WITH
ELEGANCE
ALUMEX®
ULTIMATE IN ALUMINIUM PROFILES

Powder Coating


RAL 1019


RAL 7005


RAL 7032


RAL 7039


RAL 7040


RAL 8016

RAL 9003


RAL 9005


RAL 9007

RAL 9010

Above are standard soft colours. Please contact for other colour options

Wood Finished


DW-3011 DQ


DW-3022 DQ


DW-4044 DQ


DW-6044 DQ


DW-9055 DQ

Anodizing

Natural


Bronze


Light Bronze (B)

Aluminium Alloy 6063

SPECIFICATIONS

EN AW 6063 (Al Mg0,7Si)

Aluminum Alloy 6063 is a medium strength alloy commonly referred to as an architectural alloy. It is normally used in intricate extrusions. It has a good surface finish, high corrosion resistance, is readily suited to welding and can be easily Anodized. Most commonly available as T6 temper, in the T4 condition it has good formability.

Applications 6063 is typically used in:

- Architectural applications
- Extrusions
- Window frames
- Doors
- Shop
- fittings

CHEMICAL COMPOSITION
BS EN 573-3: 2019 + AI :2022

Element	% Present
Si	0.20-0.60
Fe	0.35 Max
Cu	0.10 Max
Mn	0.10 Max
Mg	0.45-0.9
Cr	0.10 Max
Ni	-
Zn	0.10 Max
Ti	0.10 Max
Ga	-
V	-
Others(Each)	0.05
Others(Total)	0.15
Aluminium (min.)	Remainder

PHYSICAL PROPERTIES

Property	Value
Density (kg/m3)	2700
Melting Point (0C)	585-650
Electrical Conductivity (W/m.K)	28-34
Thermal Conductivity (W/m.K)	200-220
Co-Efficient of Thermal Expansion (10-6/K)	23.4
Modulus Elasticity (G Pa)	70

TEMPER TYPES

The most common temper for 6063 Aluminium are:

- T5 - Cool from an elevated temperature, and artificially aged
- T6 - Solution heat treated and artificially aged

Aluminium Alloy 6063

MECHANICAL PROPERTIES

BS EN 755-2: 2016

Profile Up to 5mm wall thickness - T5

Property	Value
Proof Stress	130
Tensile Strength	175
Elongation A	8
Elongation A50mm	6
Hardness Brinell	65

BS EN 755-2: 2016

10mm to 25mm wall thickness - T5

Property	Value
Proof Stress	110
Tensile Strength	160
Elongation A	7
Elongation A50mm	5
Hardness Brinell	65

BS EN 755-2: 2016

Up to 10mm wall thickness - T6

Property	Value
Proof Stress	170
Tensile Strength	215
Elongation A	8
Elongation A50mm	6
Hardness Brinell	75

BS EN 755-2: 2016

10mm to 25mm wall thickness - T6

Property	Value
Proof Stress	160
Tensile Strength	195
Elongation A	8
Elongation A50mm	6
Hardness Brinell	75

BILLET SPECIFICATION

CHARACTERISTICS	STANDARD
Grain Structure Size	(80-150)μm
Cell Zone Below	5mm
Beta Alpha Conversion Rate	Above 90%
Inverse Segregation	Below 150
Homogenizing Curve	580C@08h
Log Length	4800±10mm
Straightness	Less than 5mm
Diameter	152±0.5mm/ Diameter 178 ± 0.5 mm
Packaging	3 wooden block and 03 Plastic strapping
Cast Number	Y/M/Melt No/ Melt type

Product Specification for Wood Effect Profiles

<table>
<tr><th>DESCRIPTION</th><th>REFERENCE STANDARD</th><th>SPECIFICATION LIMIT</th></tr>
<tr><td>Chemical Composition</td><td>Aluminium Alloy
AW 6063, AW6060
BSEN 573-3:2019+A1:2022</td><td>
<table>
<tr><th>Element</th><th>AW-6063/AW-6060</th></tr>
<tr><td>Si</td><td>0.20-0.60</td></tr>
<tr><td>Fe</td><td>0.35 Max</td></tr>
<tr><td>Cu(Max)</td><td>0.10</td></tr>
<tr><td>Mn(Max)</td><td>0.10</td></tr>
<tr><td>Mg</td><td>0.35-0.90</td></tr>
<tr><td>Al</td><td>Remainder</td></tr>
</table>
</td></tr>
<tr><td>Tensile Strength</td><td>ISO 6892:2009/SLS-978</td><td>
<table>
<tr><th>Alloy</th><th>Temper</th><th>Wall Thickness mm</th><th>Wall Thickness mm</th><th>Elongation %(min)</th></tr>
<tr><td rowspan="2">6063</td><td>T5</td><td>t≤3</td><td>175</td><td>6</td></tr>
<tr><td>T6</td><td>t≤3</td><td>190</td><td>6</td></tr>
</table>
</td></tr>
<tr><td>Wall Thickness</td><td>BS EN 12020-2</td><td>
<table>
<tr><th colspan="2">Nominal Wall Thickness</th><th rowspan="2">CCD≤100</th><th rowspan="2">100≤CCD≤350 mm</th></tr>
<tr><th>Over</th><th>Up to including</th></tr>
<tr><td>0</td><td>2</td><td>±0.15</td><td>±0.20</td></tr>
<tr><td>2</td><td>3</td><td>±0.15</td><td>±0.25</td></tr>
<tr><td>3</td><td>6</td><td>±0.20</td><td>±0.30</td></tr>
</table>
</td></tr>
<tr><td>Cross Sectional Dimension (width/ Height)</td><td>BS EN 12020-2/ SLS 1410</td><td>Tolerance on all dimension (except open ends)/ / Tolerance on all dimensions with open Ends E ≤ 60 ≤120</td></tr>
<tr><td>Dry Film Thickness (Eddy Current Method)</td><td>EN ISO 2360</td><td>Minimum Coating thickness 48µm & Average coating thickness 60µm</td></tr>
<tr><td>Base Powder</td><td>Qualicoat</td><td>Approved (Class 2-TGIC free)</td></tr>
<tr><td>Gloss - initial (angle 60°)</td><td>ISO 2813</td><td>12 ±5 Gu</td></tr>
<tr><td>Dry Adhesion (2mm + tape)</td><td>EN ISO 2409</td><td>Cross cut rating - GT0 None of square of the lattice is detached</td></tr>
<tr><td>Polymerization Test</td><td>N/A</td><td>Saturate swap of cotton wool with solvent within 30sec, Rub it lightly back & forth 30 times in each direction</td></tr>
<tr><td>Weathering Test;
Gloss Retention (angle 60°)</td><td>ISO 2813</td><td>50% residual gloss for category 1 (Matt)</td></tr>
<tr><td>Weathering Test;
Color Change</td><td>ISO 11664-4 ΔE CIELAB</td><td>The ΔE Value shall be less than 4
Minimum 4 on the Grey Scale</td></tr>
<tr><td>Wood Effect Paper</td><td>Qualideco</td><td>Approved</td></tr>
</table>

ANODIZING SYSTEM TECHNICAL DATA SHEET

DESCRIPTION	REFERENCE STANDARD	REQUIREMENT		
		Thickness Class	Minimum average Thickness µm	Minimum Local Thickness µm
Coating Thickness	EN ISO 2360 BS EN ISO 7599	AA10	10	8
		AA15	15	12
		AA20	20	16
		AA25	25	20
Color Tolerance	ISO 3668	ΔE ≤ 5		
Weight Loss	BS EN 3210	Minimum Loss Weight 30mg/dm2		
ISO 2143 - 2017	BS EN 12373	Rating ≤ 2		

POWDER COATING TECHNICAL DATA SHEET

DESCRIPTION	REFERENCE STANDARD	REQUIREMENT		
		Gloss Category	Gloss Range	Acceptable variation
Gloss	ISO 2813	01 - (Matt)	0-30	±5 units
		02 – (Satin)	31-70	±7 units
		03 – (Gloss)	71-100	±10 units
		Permissible variation from the nominal value		
Dry Film Thickness	EN ISO 2360	Minimum Coating thickness 48µm & Average coating thickness 60µm		
Crosshatch (2mm + Tape)	EN ISO 2409	Cross cut rating – GT0 none of square of the lattice is detached		
Polymerization Test	N/A	Saturate Swap of Cotton Wool with solvent within 30sec , Rub it lightly Back & forth 30 times in each direction		
Impact EN	ISO 6272	Passes 2.50 Nm without detachment		
Bend EN	ISO 1519	5mm Cylindrical mandrel no detachment		
Cupping	EN ISO 1520	Indentation depth in excess of 5mm without film cracking		

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This colour card is based upon RAL standards. It should be considered as an indication only. In practice differences may be experienced between colours appearing on this colour card and actual powder coatings due to substrate variations, coating thickness, coating oven conditions, gloss levels, binder systems and pigments used during manufacturing. For special colour requirements and accurate assessment, please visit Alumex PLC or any Alumex dealer island wide.

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