

Novelis

Anodising quality J57S UP®



J57S UP® was specifically developed for architecture in order to produce high quality anodised facades.



1. General product properties

- Decorative with permanent metallic gloss
- Corrosion-resistant and weather-resistant
- Firm bond with the metal surface, therefore no peeling, chipping or corrosion
- Non-combustible according to DIN 4102 respectively 96/603/EG, classification into the best fire protection class (non-combustible in non-dispersed form)
- Contact with foodstuff possible according to DIN EN 602
- Electrically insulated
- Highly recyclable

2. Physical properties

Young's modulus: approx. 70,000 MPa

Density: approx. 2.7t/m³

Thermal expansion coefficient: 0.0236 mm/Kelvin/m

Electrical conductivity: 23 - 31 µS/m

Weldability: good to moderate with SG-AIMg3

3. Chemical composition according to EN 573 part 3

Alloy: EN AW 5005 (AIMg1-B)

Composition in weight percentage (max.)									
Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	other	total
0.30	0.70	0.20	0.20	0.5-1.1	0.10	0.25	0.05	0.05	0.15

4. Mechanical properties

Sheet thickness: 1.0 - 3.0 mm (Temper H14) and 4.0 mm (Temper H12)

Strength values

Strength values according to EN 485-2				
Temper	Thickness (mm)	Tensile strength R _m	Yield strength R _{p0.2}	Elongation A ₅₀
H14	1.0 - 1.5	145 - 185 MPa	≥ 120 MPa	≥ 2 %
H14	2.0 - 3.0	145 - 185 MPa	≥ 120 MPa	≥ 3 %
H12	4.0	125 - 165 MPa	≥ 95 MPa	≥ 5 %

Typical strength values (no warranty)				
Temper	Thickness (mm)	Tensile strength R _m	Yield strength R _{p0.2}	Elongation A ₅₀
H14	1.0 - 1.5	170 MPa	160 MPa	≥ 4 %
H14	2.0 - 3.0	170 MPa	160 MPa	≥ 5 %
H12	4.0	140 MPa	130 MPa	≥ 9 %





Bending radii at 90° according to EN ISO 7438:

$R = 1 \times t$: The inner bending radii (R) are equal to the sheet thickness (t).

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Bending radii at 180° according to EN ISO 7438:

Comparison of the standard quality AW 5005A with the anodising quality J57S UP®.

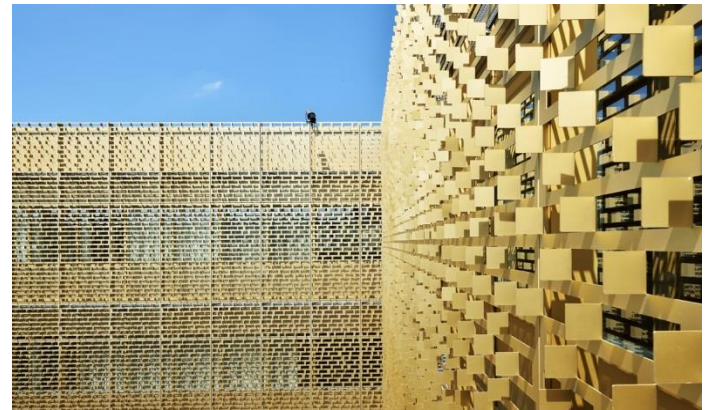
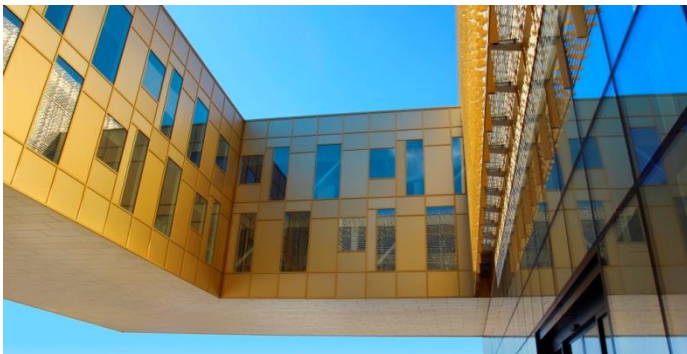
Thickness 2.0 mm : R = 1.0 (0.5 x t)		Thickness 3.0 mm : R = 1.2 (0.4 x t)	
			
AW 5005A	J57S UP®	AW 5005A	J57S UP®

5. Dimensions and tolerances

Sheets

Sheet sizes	Thickness (mm)					
	1.0	1.5	2.0	2.5	3.0	4.0
1,000 mm x 2,000 mm	■	■	■	■	■	■
1,250 mm x 2,500 mm	■	■	■		■	■
1,500 mm x 3,000 mm	■	■	■		■	■
1,500 mm x 4,000 mm	■	■	■		■	■
2,000 mm x 4,000 mm			■		■	

Dimensional tolerances for thickness, width, length, flatness and squareness in accordance with the DIN EN 485 part 4.



6. Surface

- Plain rolled surface "mill finish"
- Slightly oiled surface
- Coil-I.D. is printed on the bottom in the rolling direction (still visible after the anodising process)
- Printed UV-resistant 80 µm protected film (rolling direction = in the direction of the arrow)
- Surface is evaluated for freedom from defects after the anodising process according to DIN 17611
- In accordance with the Novelis processing and cleaning guidelines the color-uniformity of different batches is warranted as well as the brilliant surface with metallic character after the anodising process
- Novelis only takes warranty for the visible side (good site) from a metallurgical point of view for a decorative and homogeneous appearance according to properly pre-treatment and anodisation

7. Packaging units

The packaging units have a target weight of approx. 1 t and disposable packaging is used.

Depending on the length of the coil strip, smaller packages can be produced.

Packages are signed with the red label J57S UP® on the tab.

Contact Novelis

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Not just aluminium, Novelis Aluminium.™

