

NOVELIS is the world's largest producer of rolled aluminum and the global leader in beverage can recycling. We are a growth-oriented company, drawing upon our industry-leading technology and expertise to develop and deliver an expanding portfolio of premium rolled aluminum products. Novelis is an important part of the worldwide Aditya Birla Group of companies. By partnering with our customers to bring innovative products to market, by being a leader in recycling, and by operating with a mindset of sustainability, **Novelis makes the world lighter, brighter and better.**

www.novelis.com



Novelis Deutschland GmbH

Werk Nachterstedt
 OT Nachterstedt
 Gaterslebener Strasse 1
 D-06469 Stadt Seeland
 tel +49 3 47 41 77-0
 fax +49 3 47 41 77-1259
 www.novelis.com

Certified to DIN EN ISO 9001, ISO/TS 16949, DIN EN ISO 14001, EMAS, OHSAS 18001
 Changes due to technical progress are reserved.

Brighter ideas with aluminium



NOVELIS

Anodising quality J57S[®]

Product datasheet

Novelis J57S is the premium anodising quality product, specially designed for the demanding requirements of modern architectural applications - from large facades requiring more than one production batch to internal decoration. The chemical composition of the alloy is specifically designed to achieve a distinctive metallic appearance after anodising.



1 GENERAL PRODUCT PROPERTIES

- Non flammable according to 96/603/EG and non combustible according to DIN 4102
- Contact with foodstuff possible according to DIN EN 602
- Fully recyclable

2 PHYSICAL PROPERTIES

Young's modulus:	approx.. 70,000 MPa
Density:	approx. 2.7 t/m ³
Thermal expansion coefficient:	0.0236 mm per Kelvin and meter
Weldability grain:	good to moderate with SG-ALMg3 (due to heat treatment graine structure can change, which become visible during anodising process)

3 CHEMICAL COMPOSITION ACCORDING TO EN 573 PART 3

Alloy: J57S (DIN EN AW 5005 AlMg1-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 to 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 radius at 90°:

$R = 1 \times t$: The inner bending radius (R) is equal to the sheet thickness (t)

Bending test at 180° according to EN ISO 7438:

Comparison of standard quality AW 5005A with anodising quality J57S

Thickness 2,0 mm : $R = 1,0$ (0,5 x t)



AW 5005A



J57S

Thickness 3,0 mm : $R = 1,2$ (0,4 x t)



AW 5005A



J57S

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)
- lightly oiled on the top surface
- Coil-I.D. (batch number) is printed on the reverse side with arrows indicating rolling direction. This number remains legible after anodising. (still visible after the anodising process)
- printed UV-resistant 80 μ m protective film (sun of the logo points in the rolling direction)
- surface is inspected for freedom from defects after the anodising process according to DIN 17611

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 identified with the red label J57S on the tab.