

Aluminium Alloy

5005 – H34 Data Sheet



DESCRIPTION

Aluminium Alloy AA-5005 is a medium strength non heat-treatable alloy with very good resistance to atmospheric corrosion and very good weldability. In H34 temper it is strain hardened and then stabilised, which gives a slightly softer, more formable sheet than H14 at the same tensile strength.

APPLICATIONS

AA-5005 is typically used in:

- Manufacture of appliances, small boats
- Signage, Road Signs & Name Plates
- Food & Chemical Equipment
- Packaging
- architectural components
- Furniture

TYPICAL PHYSICAL PROPERTIES

Typical values for guidance – not specified in any standard

Property	Value
Density	2.70 g/cm ³
Melting Point	643 – 657°C
Thermal Expansion	23.5 ×10 ⁻⁶ /K
Modulus of Elasticity	69.5 GPa
Thermal Conductivity	201 W/m.K
Electrical Resistivity	0.033 ×10 ⁻⁶ Ω.m

CHEMICAL COMPOSITION

EN 573-3:2007, Table 1 · EN AW-5005

Element	Composition %
Silicon (Si)	0.30 Max
Iron (Fe)	0.7 Max
Copper (Cu)	0.20 Max
Manganese (Mn)	0.20 Max
Magnesium (Mg)	0.50 – 1.1
Chromium (Cr)	0.10 Max
Zinc (Zn)	0.25 Max
Other (Each)	0.05 Max
Others (Total)	0.15 Max
Aluminium (Al)	Remainder

MECHANICAL PROPERTIES

EN 485-2:2016, Table 20 · EN AW-5005, temper H34

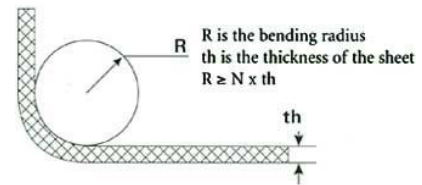
Thickness mm	Rm	Rp0.2	A50	HBW
over 0.5–1.5	145–185	110	4	47
over 1.5–3.0	145–185	110	5	47
over 3.0–6.0	145–185	110	6	47
over 6.0–12.5	145–185	110	8	47

Rm and Rp0.2 in MPa; A50 elongation in %; Rp0.2 and A50 are minima. HBW hardness for information only.

MINIMUM BEND RADIUS

EN 485-2:2016 · EN AW-5005, temper H34 · inside radius as a multiple of thickness

Thickness mm	90° bend	180° bend
over 0.2–0.5	0.5 × t	1.5 × t
over 0.5–1.5	1 × t	1.5 × t
over 1.5–3	1 × t	2 × t
over 3–6	2 × t	—
over 6–12.5	2.5 × t	—



These are inside radii, not pin diameters. A dash means bending is not recommended at that thickness – sheets may crack upon bending.

THICKNESS TOLERANCE

EN 485-4:1993 cold-rolled ≤6 mm · EN 485-3:2003 hot-rolled >6 mm

Thickness mm	1219 mm	1500 mm	2000 mm
0.5	±0.04	±0.05	±0.06
0.8	±0.06	±0.07	±0.08
1.5	±0.09	±0.10	±0.11
3.0	±0.13	±0.15	±0.17
4.0	±0.20	±0.22	±0.23
6.0	±0.24	±0.25	±0.26
10.0 †	±0.45	±0.50	±0.50

† hot-rolled plate to EN 485-3; thinner gauges are cold-rolled to EN 485-4. Measured disregarding 10 mm from the edges.

SIZES RANGE FOR AA 5005 H34

We stock Aluminium Alloy 5005 H34 in Plain sheets and plates at our warehouses in Dubai, Abu Dhabi & Sharjah. Please contact us on sales@dinco.ae with your inquiries or call: 04-3312182 or visit www.dinco.ae