AIROLDI METALLI SPA

product sheet

# ALLOY 5005

## SHEETS AND COILS
## COLD ROLLED

COLOUR CODE

## Aluminium Alloy 5005 (EN AW 5005 AlMg1)

**According to EU directives: 2000/53/CE (ELV) - 2011/65/CE (RoHS II)**

- Aluminium - magnesium alloy.
- Typical rolled alloy with medium-low mechanical characteristics
- It is principally used in forniture, building, chemical industry, packaging and marine structures.
- Excellent results in decorative anodization.

| | | THICKNESS | | | |
|---|---|---|---|---|---|
| | | 0,5≤1,5 | 1,5≤3 | 3≤6 | 6≤12,5 |
| **Physical state** | | H24 | | | |
| **Mechanical properties** | | | | | |
| Ultimate tensile strenght Rm[N/mm$^2$] | minimal | 160 | 160 | 160 | 160 |
| Yield strenght Rp 0,2 | minimal | 120 | 120 | 120 | 120 |
| Elongation $A_5$ | minimal | 5,9 | 5,9 | 5,9 | 5,9 |
| Hardness Brinnel HB (information only) | minimal | 47 | 47 | 47 | 47 |
| **Physical properties** | | | | | |
| Density [kg/dm$^3$] | | 2,70 | | | |
| Module of elasticity [Gpa] | | 68 | | | |
| Electrical conductivity at 20 °C [m/Ω-mm$^2$] | | 31 | | | |
| Coefficient of thermal expansion [10$^{-6}$/K] | | 24 | | | |
| Thermal conductivity [w/m.K] | | 200 | | | |
| Melting point range °C | | 630 ÷ 652 | | | |
| **Processing characteristics** | | | | | |
| Machinability | | + | | | |
| Dimensional stability | | ++ | | | |
| Erodability | | ++ | | | |
| Weldability | | ++++ | | | |
| Polishability | | ++++ | | | |
| Anodizing decorative | | +++++ | | | |
| Anodizing hard | | +++ | | | |
| Corrosion resistance (weather) | | +++++ | | | |
| Corrosion resistance (seaweather) | | +++++ | | | |

**Legend - Processing Characteristics**

Excellent +++++ | Good ++++ | Accettable +++ | Mediocre ++ | Inadequate + | Not suitable -

**CHEMICAL COMPOSITION**

| DENOMINATION | Si | Fe | Mn | Mg | Cu | Zn | Cr | Ti | Ni | Pb | Bi | V | Others | IMPURITY | ALUMINIUM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5005 | 0,30 | 0,70 | 0,20 | 0,50-1,10 | 0,20 | 0,25 | 0,10 | | | | | | | 0,05 | 0,15 | remainder |

**Airoldi Metalli S.p.a.** | Viale Grandi, 59 | 23847 Molteno (LC) | Italia | Telefono: +39 031 3574.111 r.a. | info@airoldimetalli.it | **www.airoldimetalli.it**