



## Aluminium Alloy 2011 (EN AW 2011 AlCu6BiPb)

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

- Aluminium-copper alloy.
- Ideal alloy for automatic lathe it doesn't wear the tools, high mechanical strength and excellent machinability.
- It can be decorative anodized.

|   |         | KEY/THICKNESS |  |
|---|---------|---------------|--|
|   |         | ≤ 60          |  |
|   |         | T6            |  |
| <b>Physical Properties</b>                              |         |               |  |
| <b>Mechanical Properties</b>                            |         |               |  |
| Ultimate tensile strength Rm [N/mm <sup>2</sup> ]       | minimal | 310           |  |
| Yield strength Rp 0,2                                   | minimal | 230           |  |
| Elongation As   | minimal | 8             |  |
| Hardness Brinell HB (information only)                  | minimal | 110           |  |
| <b>Physical properties</b>                              |         |               |  |
| Density [kg/dm <sup>3</sup> ]                           |         | 2,83          |  |
| Module of elasticity [Gpa]                              |         | 70            |  |
| Electrical conductivity at 20 °C [m/Ω-mm <sup>2</sup> ] |         | 37            |  |
| Coefficient of thermal expansion [10 <sup>-6</sup> /K]  |         | 22,9          |  |
| Thermal conductivity [w/m.K]                            |         | 151           |  |
| Melting point range °C                                  |         | 540 ÷ 645     |  |
| <b>Processing Characteristics</b>                       |         |               |  |
| Machinability   |         | +++++         |  |
| Dimensional Stability                                   |         | ++++          |  |
| Erodability   |         | ++++          |  |
| Weldability   |         | -             |  |
| Polishability   |         | +++           |  |
| Anodizing Decorative                                    |         | +++           |  |
| Anodizing Hard  |         | -             |  |
| Corrosion resistance (weather)                          |         | +++           |  |
| Corrosion resistance (seawater)                         |         | -             |  |

**Legend - Processing Characteristics**

Excellent +++++      Good ++++      Acceptable +++      Mediocre ++      Inadequate +      Not suitable -

**CHEMICAL COMPOSITION**

| DENOMINATION | Si    | Fe    | Mn | Mg | Cu        | Zn    | Cr | Ti | Ni | Pb        | Bi        | Sn | IMPURITY | ALUMINIUM      |
|--------------|-------|-------|----|----|-----------|-------|----|----|----|-----------|-----------|----|----------|----------------|
| 2011         | ≤0,40 | ≤0,70 |    |    | 5,00-6,00 | ≤0,30 |    |    |    | 0,20-0,40 | 0,20-0,60 |    | 0,05     | 0,15 remainder |