

SPECIFICATION SHEET

Solar Panel Aluminum Extrusion Profile

Aluminium solar panel frame and mounting bracket are used to seal and fix solar battery components. They provide the structural stability for the overall combination of glass, EVA encapsulates, the cell and the back sheet. Enhancing components strong support and increasing the battery service life.

| No | Alloy | Temper | Thickness | Size | Length |
|----|--------------------------|--------|-----------|--|---|
| 1 | 6060, 6061 6063, 6082 | T5/T6 | 0.2-6.0mm | 45*35mm, 60*35mm, 46*40mm, 46*50mm, etc. | 100-12000 mm As per customer request. |

*We can support the aluminum solar module frame according your design drawings and samples

CHEMICAL COMPOSITION (%)

Standard: GB/T 3190-2008

| Grade | Si | Fe | Cu | Mn | Mg | Cr | Ni | Zn | Ti | Al |
|-------|---------|---------|----------|----------|----------|-----------|----|------|------|--------|
| 6060 | 0.3-0.6 | 0.1-0.3 | 0.10 | 0.10 | 0.35-0.6 | 0.05 | - | 0.15 | 0.10 | remain |
| 6061 | 0.4-0.8 | 0.70 | 0.15-0.4 | 0.15 | 0.8-1.2 | 0.04-0.35 | - | 0.25 | 0.15 | remain |
| 6063 | 0.2-0.6 | 0.35 | 0.10 | 0.10 | 0.45-0.9 | 0.10 | - | 0.10 | 0.10 | remain |
| 6082 | 0.7-1.3 | 0.50 | 0.10 | 0.40-1.0 | 0.6-1.2 | 0.25 | - | 0.20 | 0.10 | remain |

MECHANICAL PROPERTIES

Standard: GB/T 3880.2-2006; GB/T 4437.1-2015

| Alloy | Alclad classify | Temper | Sample Temper | Thickness /mm | Tensile strength R _m /MPa | Yield strength R _{p0.2} /MPa | Elongation/% | | Brinell hardness |
|-------|-----------------|--------|---------------|---------------|--------------------------------------|---------------------------------------|-------------------|-------------------|------------------|
| | | | | | | | A _{50mm} | A _{5.65} | |
| 6061 | - | T4 | T4 | ALL | 180 | 110 | 16 | 14 | - |
| | | T6 | T6 | >0.40-1.50 | 290 | 240 | 6 | - | 80 |
| 6063 | - | T4 | T4 | ≤12.5 | 130 | 70 | 14 | 12 | - |
| | | | | >12.5-25.0 | 125 | 60 | - | 12 | - |
| 6082 | - | T4 | T4 | ≤25.0 | 205 | 110 | 12 | 14 | - |
| | | | | >25.0 | 290 | 250 | 6 | 8 | - |
| 6082 | - | T6 | T6 | >50-25.0 | 310 | 260 | 8 | 10 | - |

*1 Coil samples bending 90°, t – thickness of coil

PHYSICAL PROPERTIES

| Property | Value | Unit |
|------------------------|------------|---------------------|
| Density(20°C) | 2.65-2.73 | g/cm ³ |
| Melting Point | 575-660 | °C |
| Thermal Expansion | 23.4-23.8 | (10-6K-1)(20/100°C) |
| Specific heat capacity | 890-910 | J/(Kg.K)(0/100°C) |
| Modulus of Elasticity | 69-71 | GPa |
| Thermal Conductivity | 172-225 | W/(m. K) 20°C |
| Resistivity | 29.1-38.22 | nΩ .m |

Formability
Very Good

Weldability
Good

Machinability
Very Good

Corrosion Resistance
Very Good

APPLICATIONS

It is used to seal and fix solar battery components.

SURFACE TREATMENT

mill finish, anodized, sand blasting, electrophoresis, powder coating, wood colour, etc.

PRODUCTS



PACKING

Shanghai Metal Products are packed and labelled according to the regulations and customer's requests. Great care is taken to avoid any damage which might be caused during storage or transportation. In addition, clear labels are tagged on the outside of the packages for easy identification of the product I. D. and quality information.

