Sheet and Plate (5086-H116 or 5083-H116 or Dual)
Several sizes dual certified

The following specifications cover Aluminum 5083
QQ A250/6

CHEMISTRY DATA
Aluminum: Balance
Chromium: 0.05–0.25
Copper: 0.1 max.
Iron: 0.4 max.
Magnesium: 4–4.9
Manganese: 0.4–1
Remainder Each: 0.05 max.
Remainder Total: 0.15 max.
Silicon: 0.4 max.
Titanium: 0.15 max.
Zinc: 0.25 max.

MECHANICAL DATA
Form: Sheet
Condition: H116
Temperature: 68
Tensile Strength: 42
Yield Strength: 30
Elongation: 12

PHYSICAL DATA
Density: 0.096 lb/cu. in.
Specific Gravity: 2.66
Melting Point: 1070 Deg F
Poissons Ratio: 0.33
Modulus of Elasticity Tension: 10.3
Modulus of Elasticity Torsion: 3.8

Principal Design Features
This is a non-heat treatable alloy for strengthening. It has very good corrosion resistance, is easily welded and does have good strength.

Applications
Commonly used in the manufacture of unfired, welded pressure vessels, marine, auto aircraft cryogenics, drilling rigs, TV towers, transportation equipment, and in missile components.

Machinability
No specific data. However the alloy is machinable by conventional means.

Forming
Forming characteristics are good for either hot or cold working.

Welding
Weldability of this alloy is very good by conventional means. When filler rod is required it should be the same alloy, 5083.

Heat Treatment
This is a non-heat treatable alloy.

Forging
Forging may be done in the range of 850 to 750 °F.

Hot Working
Hot forming, when severe deformation is required, may be done at 400 °F or higher to 700 °F.

Cold Working
AL 5083 is readily cold worked by conventional methods. In the annealed (O temper) condition plate of 0.250” thick can be bent on 1.5 T radius.

Annealing
Annealing may be done at 650 F for sufficient time for thorough heating, followed by air cooling.

Aging
Not applicable to this alloy.

Tempering
Not applicable.

Hardening
Hardening is accomplished by means of cold working only.

Other Physical Props
Electrical conductivity 28 % of copper.

Other Mechanical Props
Shear strength in O temper is 25 ksi.

Aluminum Mill Product Specifications
Available Forms:
Sheet and Plate ASTM-B928, FEDERAL-QQ-A-250/7