



AUTOCRAFT AL5183



TYPICAL ALL WELD METAL MECHANICAL PROPERTIES:

Single-vee butt weld with 5083 Aluminium (reduced section tensile specimen)
Welding grade Argon:
0.2% Proof Stress 152 MPa
Tensile Strength 297 MPa
Elongation (in 2 inches) 16%

WIRE ANALYSIS LIMITS:

Single values are maximum allowable, unless otherwise stated.
Si: 0.40% Fe: 0.40% Cu: 0.10%
Mn: 0.5-1.0% Mg: 4.3-5.2% Cr: 0.05-0.25%
Zn: 0.25% Ti: 0.15%
Total others: 0.15% Al: Balance

RECOMMENDED SHIELDING GAS:

- Welding Grade Argon
- Agrosshield 80T or Ar + 25% He or equivalent gases
- Agrosshield 81T or He + 25% Ar or equivalent gases
- EN439: I1 & I3 shielding gases

APPROVALS:

Det Norske Veritas (DNV)
Lloyds register of Shipping
American Bureau of Shipping

- ▲ For GMAW welding of wrought and cast aluminium alloys containing magnesium.
- ▲ Superior surface cleanliness for improved resistance to porosity.

Classifications:

AS 2717.2: E5183.
AWS/ASME-SFA A5.10: ER5183.

Packaging and Operating Data:

Wire Dia mm	Voltage Range (volts)	Wire Feed Speed (metres/min)	Current Range (amps)	Pack Type*	Pack Weight	Part No
1.0	17 – 23	6.0 – 16.5	110 – 220	Spool	7kg	722239
1.2	20 – 25	5.5 – 12.0	150 – 250	Spool	7kg	722240

* Spool (ø300mm).

AUTOCRAFT DEOXIDISED COPPER



TYPICAL ALL WELD METAL MECHANICAL PROPERTIES:

Welding grade Argon:
0.2% Proof Stress 55 MPa
Tensile Strength 200 MPa
Elongation (in 2 inches) 30%
Electrical Conductivity 40% IACS
Hardness 55 HB
Weld Metal Density $7.47 \times 10^3 \text{ kg/m}^3$

TYPICAL WIRE ANALYSIS LIMITS:

Mn: 0.5% Si: 0.5% P: 0.15%
Sn: 1.0% Cu: 98.0% min Others: 0.50%
Single values are maximum allowable, unless otherwise stated.

RECOMMENDED SHIELDING GAS:

- Welding Grade Argon
- Argon + 25% He
- Helium + 25% Ar

- ▲ A High Copper Alloy for GMA Joining and Overlay Applications.
- ▲ Fabricating Deoxidised Copper and Electrolytic Pitch Copper Components.
- ▲ Repair of Copper Castings.
- ▲ Lower Strength Welding of Galvanised Steels and Deoxidised Copper to Mild Steel Joints.
- ▲ Typical applications include the GMA welding of copper transformer connectors, Copper bus bars, billet molds and heater elements etc.

Classifications:

AWS/ASME-SFA A5.7: ERCu.

Packaging and Operating Data:

These machine settings are a guide only. Actual voltage and welding current used will depend on machine characteristics, plate thickness, run size, shielding gas and operator technique etc.

Wire Dia mm	Voltage Range (volts)	Wire Feed Speed (metres/min)	Current Range (amps)	Pack Type*	Pack Weight	Part No
1.6	28 – 32	5.5 – 11.5	160 – 380	Spool	13kg	720260

* Spool (ø300mm).

AUTOCRAFT SILICON BRONZE



TYPICAL ALL WELD METAL MECHANICAL PROPERTIES:

Welding grade Argon:
0.2% Proof Stress 170 MPa
Tensile Strength 380 MPa
Elongation (in 2 inches) 50%

TYPICAL WIRE ANALYSIS:

Fe: 0.25% Mn: 1.0% Si: 3.40%
Sn: 0.90% Zn: 0.90% Cu: Balance

RECOMMENDED SHIELDING GAS:

- Welding Grade Argon
- Argon + 10-25% CO₂
- Argon + 0-3% O₂
- Helium + 25% Ar

TYPICAL WELD DEPOSIT HARDNESS WITH ARGON +10-15% CO₂:

HRB
Three Layers on Mild Steel 48

COMPARABLE CIGWELD PRODUCTS:

Comweld Silicon Bronze rod
AWS A5.7: ERCuSi-A

- ▲ A Copper Based Wire for the GMA Welding of Copper-Silicon Alloys including Cusilman and Everdur.
- ▲ Used for the Lower Strength Welding of Steels.
- ▲ Extensively used for the GMA Welding of Copper-Silicon Alloys used in Hot Water Systems, Heat Exchangers, Calorifiers and Marine Components for their Corrosion Resistance.

Classifications:

AWS/ASME-SFA A5.7: ERCuSi-A.

Packaging and Operating Data:

These machine settings are a guide only. Actual voltage and welding current used will depend on machine characteristics, plate thickness, run size, shielding gas and operator technique etc.

Wire Dia mm	Voltage Range (volts)	Wire Feed Speed (metres/min)	Current Range (amps)	Pack Type*	Pack Weight	Part No
0.9	21 – 26	7.5 – 14.5	100 – 250	Spool	13kg	720015

* Spool (ø300mm).