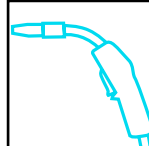


WELDING CONSUMABLES GAS METAL ARC WELDING (MIG) WIRES



AUTOCRAFT LW1-6



TYPICAL ALL WELD METAL MECHANICAL PROPERTIES:

	Argon	Welding Grade +10-25% CO ₂ :
Yield Stress	450 MPa	410 MPa
Tensile Strength	550 MPa	525 MPa
Elongation	29%	32%
CVN Impact Val.	120 J @ -20°C	110 J @ -20°C

TYPICAL WIRE ANALYSIS:

C: 0.07%	Mn: 1.55%	Si: 0.88%
S: 0.012%	P: 0.015%	

TYPICAL DIFFUSIBLE HYDROGEN LEVELS TO AS3752:

1.0 - 2.0 mls of hydrogen / 100gms of deposited weld metal.

RECOMMENDED SHIELDING GAS:

- Argon + 10-25% CO₂.
- Welding Grade CO₂

APPROVALS*:

CO₂ & Argon 10-25% CO₂:
 Lloyd's Register of Shipping Grade 3S, 3YS
 American Bureau of Shipping Grade 3SA, 3YSA
 Det Norske Veritas Grade 111YMS
 * Approvals do not include 0.6mm and 0.8mm Autocraft LW1-6 wires

COMPARABLE CIGWELD PRODUCTS:

Comweld LW1-6 TIG rod
 Comweld LW1 TIG rod
 Verti-Cor 3XP FCAW
 Metal-Cor Xp FCAW

- ▲ A Higher Manganese / Silicon Steel Wire for GMA Welding.
- ▲ Use with CO₂ and Argon Based Shielding Gases.
- ▲ Wide Range of Minispool, Handispool and Autopak Packaging Options.
- ▲ Suitable for the positional Gas Metal Arc Welding (GMAW) of mild and low alloy steels, used in general fabrication and structural work.

Classifications:

AS/NZS 2717.1: ES6-GC/M-W503AH.

AWS/ASME-SFA A5.18: ER70S-6.

The advantages of AUTOPAK®.

- Reduced downtime = Higher productivity outcomes.
- Straight/Twist free wire = Greater wire accuracy in the joint.
- Smaller Acceleration weight = Improved arc starting.
= Less stress on wire-feed unit.
= Less wire slippage and burn backs.
- Fully Enclosed pack and pay-off system = Protection against dust, dirt and moisture.
- Compact and manoeuvrable locations. = Ease of use in confined and restricted Autopak occupies only 0.2m² of floor space.



Packaging and Operating Data:

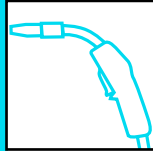
Wire Dia mm	Voltage Range (volts)	Wire Feed Speed (metres/min)	Current Range (amps)	Pack Type*	Pack Weight	Part No
0.6	12 – 14	3.5 – 14	35 – 100	Mini Spool (4 per pack)	4 x 0.8kg	721104
				Handi Spool	5kg	721108
				Spool	15kg	720103
0.8	14 – 22	3.5 – 14	50 – 180	Mini Spool (4 per pack)	4 x 0.8kg	721105
				Handi Spool	5kg	721109
				Spool	15kg	720114
0.9	15 – 26	3.5 – 15	70 – 230	Spool	15kg	720090
				AutoPak	250kg	720122A
				Spool	15kg	720094
1.0	16 – 29	3.5 – 15	100 – 280	AutoPak	250kg	720123A
				Spool	15kg	720096
				AutoPak	250kg	720124A
1.2	18 – 32	2.5 – 15	120 – 350	Spool	15kg	720095
				AutoPak	250kg	720125A
				Spool	15kg	720095
1.6	18 – 34	2.5 – 10	180 – 390	Spool	15kg	720095
				AutoPak	250kg	720125A
				Spool	15kg	720095

* Mini Spool (ø100mm); Handi Spool (ø200mm); Spool (ø300mm); AutoPak (ø510mm x H.770mm).

AUTOPAK® Parts List:

AUTOPAK accessories "Standard Types".	Part Number.
1. Clear plastic AUTOPAK dome (510mm base diam. x 300mm height).	720001
2. AUTOPAK conduit assembly kit	720008





AUTOCRAFT LW1



TYPICAL ALL WELD METAL MECHANICAL PROPERTIES:

Welding Grade CO ₂ :	Argon 10-25% CO ₂ :
Yield Stress 420 MPa	390 MPa
Tensile Strength 520 MPa	500 MPa
Elongation 30%	31%
CVN Impact Val. 110 J @ -20°C	100 J @ -20°C

TYPICAL WIRE ANALYSIS:

C: 0.08%	Mn: 1.16%	Si: 0.70%
S: 0.010%	P: 0.015%	

TYPICAL DIFFUSIBLE HYDROGEN LEVELS TO AS3752:

1.0 - 2.0 mls of hydrogen / 100gms of deposited weld metal.

APPROVALS:

CO ₂ & Argon 10-25% CO ₂ :	
L.R.S. Grade 3S	
A.B.S. Grade 3SA	
D.N.V. Grade IIIYMS	

RECOMMENDED SHIELDING GAS:

- Argon + 10-15% CO₂
- Argon + 10-25% CO₂
- Welding Grade CO₂

COMPARABLE CIGWELD PRODUCTS:

Comweld LW1 TIG rod
Comweld LW1-6 TIG rod
Verti-Cor 3XP FCAW
Supre-Cor 5 FCAW

- ▲ A Premium Quality Low Carbon Steel Wire for GMA Welding.
- ▲ Suitable for the all positional multi-pass Gas Metal Arc welding of mild, low alloy and medium strength steels, as used in general fabrication, pressure vessels and structural work.

Classifications:

AS/NZS 2717.1:	ES4-GC/M-W503AH.
AWS/ASME-SFA A5.18:	ER70S-4.

Packaging and Operating Data:

Wire Dia mm	Voltage Range (volts)	Wire Feed Speed (metres/min)	Current Range (amps)	Pack Type*	Pack Weight	Part No
0.9	15 – 26	3.5 – 15	70 – 230	Spool	15kg	720115
1.2	18 – 32	2.5 – 15	120 – 350	Spool	15kg	720116

* Spool (ø300mm);

AUTOCRAFT SUPER STEEL



TYPICAL ALL WELD METAL MECHANICAL PROPERTIES:

Welding Grade CO ₂ :	Argon 20-25% CO ₂ :
Yield Stress 425 MPa	
Tensile Strength 520 MPa	
Elongation 34%	
CVN Impact Values 75 J av @ -20°C	

TYPICAL WIRE ANALYSIS:

C: 0.05%	Mn: 1.10%	Si: 0.55%
Ti: 0.10%	Zr: 0.06%	Al: 0.08%
S: 0.007%	P: 0.008%	Fe: Balance

TYPICAL DIFFUSIBLE HYDROGEN LEVELS TO AS3752:

1.0 - 2.0 mls of hydrogen / 100gms of deposited weld metal.

RECOMMENDED SHIELDING GAS:

- Argon + 10-25% CO₂
- Argon + 1-3% O₂
- Welding Grade CO₂

COMPARABLE CIGWELD PRODUCTS:

Comweld Super Steel TIG rod

- ▲ A Low Carbon, Triple Deoxidised Steel Wire for GMA Welding.
- ▲ For use with Welding Grade CO₂ or Argon Based Shielding Gases.
- ▲ Triple Deoxidised for Superior Weld Deposit Quality and Resistance to Porosity.
- ▲ The ideal choice for the welding of rusty or mill scaled plates and pipes and the root pass welding of pipes, tanks, and heavy walled joints.

Classifications:

AS/NZS 2717.1:	ES2-GC/M-W503AH.
AWS/ASME-SFA A5.18:	ER70S-2.

Packaging and Operating Data:

Wire Dia mm	Voltage Range (volts)	Wire Feed Speed (metres/min)	Current Range (amps)	Pack Type*	Pack Weight	Part No
1.2	18 – 32	3.5 – 15	120 – 350	Spool	15kg	720054

* Spool (ø300mm).

AUTOCRAFT Mn-Mo



TYPICAL ALL WELD METAL MECHANICAL PROPERTIES:

Welding Grade CO ₂ :	Argon 20-25% CO ₂ :
Yield Stress 580 MPa	
Tensile Strength 680 MPa	
Elongation 24%	
CVN Impact Values 80 J av @ +20°C	

TYPICAL WIRE ANALYSIS:

C: 0.08%	Mn: 1.73%	Si: 0.65%
Mo: 0.45%	S: 0.011%	P: 0.017%

TYPICAL DIFFUSIBLE HYDROGEN LEVELS TO AS3752:

1.0 - 2.0 mls of hydrogen / 100gms of deposited weld metal.

RECOMMENDED SHIELDING GAS:

- Argon + 20-25% CO₂
- Argon + 1-3% O₂
- Welding Grade CO₂

- ▲ A Manganese Molybdenum Steel Wire for the GMA Welding of Higher Strength steels.

- ▲ For Use with Welding Grade CO₂ or Argon Based Shielding Gases.
- ▲ 550 MPa Tensile Class Weld Deposits.
- ▲ Suitable for the all positional fillet and butt welding of a wide range of higher strength steels, particularly those used in the fabrication of pressure vessels, boilers and pipelines.

Classifications:

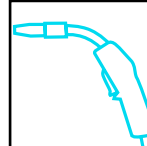
AS/NZS 2717.1:	ESD2-GC/M-W559AH.
AWS/ASME-SFA A5.28:	ER80S-D2.

Packaging and Operating Data:

Wire Dia mm	Voltage Range (volts)	Wire Feed Speed (metres/min)	Current Range (amps)	Pack Type*	Pack Weight	Part No
0.9	16 – 28	3.5 – 15	70 – 230	Spool	15kg	720049
1.2	18 – 32	3.5 – 15	120 – 350	Spool	15kg	720052

* Spool (ø300mm).

WELDING CONSUMABLES GAS METAL ARC WELDING (MIG) WIRES



SECTION THREE

AUTOCRAFT NiCrMo



TYPICAL ALL WELD METAL MECHANICAL PROPERTIES:	
Argon 1-3% CO ₂ :	Argon 20-25% CO ₂ :
Yield Stress 730 MPa	707 MPa
Tensile Strength 790 MPa	770 MPa
Elongation 17%	21%
CVN Impact Val. 130 J @ -29°C	72 J @ -29°C
80 J @ -51°C	50 J @ -51°C

TYPICAL WIRE ANALYSIS:		
C: 0.08%	Mn: 1.40%	Si: 0.60%
Ni: 1.40%	Cr: 0.40%	Mo: 0.25%
V: 0.10%		

TYPICAL DIFFUSIBLE HYDROGEN LEVELS TO AS3752:
1.0 - 2.0 mls of hydrogen / 100gms of deposited weld metal.

RECOMMENDED SHIELDING GAS:
• Argon + 20-25% CO ₂
• Argon + 1-3% O ₂
• Welding Grade CO ₂

COMPARABLE CIGWELD PRODUCTS:
Verti-cor 111 K3 FCAW
Tensi-Cor 110T XP FCAW

The actual weld metal mechanical properties achieved with Autocraft Ni Cr Mo are influenced by many factors including, base metal analysis, welding parameters, shielding gas selection and number of passes etc. Please consult your nearest CIGWELD branch for welding procedure recommendations.

- ▲ A Low Alloy Steel Wire for the GMA Welding of High Strength steels.
- ▲ For Use with Welding Grade CO₂ or Argon Based Shielding Gases.
- ▲ 760 MPa Tensile Class Weld Deposits.
- ▲ Suitable for the all positional fillet and butt welding of a wide range of high strength steels, particularly quenched and tempered types such as Bisalloy 80, USS-T1 types and Welten 80C etc.

Classifications:

AS/NZS 2717.1: ESMG-GC/M-W769AH.
AWS/ASME-SFA A5.28: ER110S-G.

Packaging and Operating Data:

Wire Dia mm	Voltage Range (volts)	Wire Feed Speed (metres/min)	Current Range (amps)	Pack Type*	Pack Weight	Part No
1.2	18 – 32	3.5 – 15	120 – 350	Spool	15kg	720053

* Spool (ø300mm).

AUTOCRAFT CrMo1



TYPICAL ALL WELD METAL MECHANICAL PROPERTIES:	
Argon 1-3% CO ₂ :	
0.2% Proof Stress 500 MPa	
Tensile Strength 600 MPa	
Elongation 20%	
CVN Impact Values 60 J av @ +20°C	
Post weld heat treated at 620°C as required by AWS A5.28.	

TYPICAL WIRE ANALYSIS:		
C: 0.09%	Mn: 0.60%	Si: 0.60%
Cr: 1.30%	Mo: 0.50%	P: 0.015%
S: 0.010%	Fe: Balance	

TYPICAL DIFFUSIBLE HYDROGEN LEVELS TO AS3752:
1.0 - 2.0 mls of hydrogen / 100gms of deposited weld metal.

RECOMMENDED SHIELDING GAS:
• Argon + 20-25% CO ₂
• Argon + 1-3% O ₂

COMPARABLE CIGWELD PRODUCTS:
Alloycraft 80-B2 electrode
Comweld CrMo1 TIG rod
Verti-cor 80Ni 1 FCAW

- ▲ A Low Alloy Steel Wire for the GMA welding of Matching Cr-Mo-Steels.
- ▲ Recommended for the GMA welding of 1/2Cr-1/2Mo, 1Cr-1/2Mo and 1 1/4Cr-1/2Mo steel pipes, plates and castings.

Classifications:

AS/NZS 2717.1: ESB2-GM-W559AH.
AWS/ASME-SFA A5.28: ER80S-B2.

Packaging and Operating Data:

Wire Dia mm	Voltage Range (volts)	Wire Feed Speed (metres/min)	Current Range (amps)	Pack Type*	Pack Weight	Part No
1.2	18 – 32	3.5 – 15	120 – 350	Spool	15kg	720029

* Spool (ø300mm).

AUTOCRAFT 308LSi



TYPICAL ALL WELD METAL MECHANICAL PROPERTIES:	
Argon 1-3% CO ₂ :	
0.2% Proof Stress 450 MPa	
Tensile Strength 620 MPa	
Elongation 36%	
CVN Impact Values 90 J av @ -60°C	

TYPICAL WIRE ANALYSIS:		
C: 0.02%	Mn: 2.05%	Si: 0.80%
Cr: 19.95%	Ni: 10.25%	P: 0.020%
S: 0.005%	Fe: Balance	

FERRITE NUMBER:
5 – 10 FN

RECOMMENDED SHIELDING GAS:
• Argon+ 1-3% O ₂
• Argon + 2-5% CO ₂

COMPARABLE CIGWELD PRODUCTS:
Satinchrome 308L-17 electrode
Comweld 308L TIG rod
Shieldchrome 308LT FCAW wire

- ▲ A Steel Wire for the GMA Welding of 304 and 304L Type Stainless Steels.
- ▲ Recommended for the general welding of 201, 302, 321, 347, 409 and 444 type stainless steels.

Classifications:

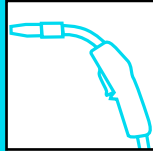
AS/NZS 2717.3: ES308LSi.
AWS/ASME-SFA A5.9: ER308LSi.

Packaging and Operating Data:

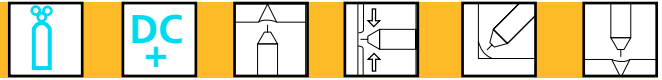
These machine settings are a guide only. Actual voltage and welding current used will depend on machine characteristics, plate thickness, run size, shielding gas and operator technique etc.

Wire Dia mm	Voltage Range (volts)	Wire Feed Speed (metres/min)	Current Range (amps)	Pack Type*	Pack Weight	Part No
0.9	16 – 24	4.5 – 15.0	70 – 200	Spool	15kg	721271
1.2	20 – 28	3.0 – 10.0	150 – 280	Spool	15kg	721272

* Spool (ø300mm).



AUTOCRAFT 309LSI



TYPICAL ALL WELD METAL MECHANICAL PROPERTIES:

0.2% Proof Stress	Argon 1-3% CO ₂ : 450 MPa
Tensile Strength	610 MPa
Elongation	36%
CVN Impact Values	90 J av @ -110°C

TYPICAL WIRE ANALYSIS:

C: 0.02%	Mn: 2.10%	Si: 0.75%
Cr: 23.75%	Ni: 13.75%	P: 0.020%
S: 0.005%	Fe: Balance	

FERRITE NUMBER:

10 – 15 FN

RECOMMENDED SHIELDING GAS:

- Argon + 1-3% O₂
- Argon + 2-5% CO₂

COMPARABLE CIGWELD PRODUCTS:

Satinchrome 309Mo-17 electrode
AWS A5.4: E309Mo-17
Comweld 309L TIG rod
AWS A5.9: ER309L
Shieldchrome 309LT FCAW wires
AWS A5.22: E309LT1-1/4

- ▲ A Stainless Steel Wire for the GMA Welding of 309 and 309L Type Stainless Steels.
- ▲ Also suitable for a wide range of other welding applications including: the dissimilar joining of "300 series" and stainless steel grades to mild or low alloy steels, an intermediate or buttering layer in the butt welding of clad steel.

Classifications:

AS/NZS 2717.3:	ES309LSi.
AWS/ASME-SFA A5.9:	ER309LSi.

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	16 – 24	4.5 – 15.0	70 – 200	Spool	15kg	721276
1.2	20 – 28	3.0 – 10.0	150 – 280	Spool	15kg	721277

* Spool (ø300mm).

AUTOCRAFT 316LSI



TYPICAL ALL WELD METAL MECHANICAL PROPERTIES:

0.2% Proof Stress	Argon 1-3% CO ₂ : 450 MPa
Tensile Strength	620 MPa
Elongation	36%
CVN Impact Values	90 J av @ -60°C

TYPICAL WIRE ANALYSIS:

C: 0.02%	Mn: 2.05%	Si: 0.80%
Cr: 19.95%	Ni: 10.25%	P: 0.020%
S: 0.005%	Fe: Balance	

FERRITE NUMBER:

5 – 10 FN

RECOMMENDED SHIELDING GAS:

- Argon + 1-3% O₂
- Argon + 2-5% CO₂

COMPARABLE CIGWELD PRODUCTS:

Satinchrome 316L-17 MMBW
Comweld 316L TIG
Shieldchrome 316LT FCAW

- ▲ A Stainless Steel Wire for the GMA Welding of 316 and 316L Type Stainless Steels.
- ▲ Also suitable for the general welding of other 300 and 400 series stainless steels including 301, 302, 304/304L, 321, 347, 410 and 430.

Classifications:

AS/NZS 2717.3:	ES316LSi.
AWS/ASME-SFA A5.9:	ER316LSi.

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
0.8	16 – 20	5.0–15.0	60–150	Mini spool (4 per pack)	4 x 1kg	721285
0.9	16 – 24	4.5 – 15.0	70 – 200	Handi spool	5kg	720283
0.9	16 – 24	4.5 – 15.0	70 – 200	Spool	15kg	721286
0.9	16 – 24	4.5 – 15.0	70 – 200	Autopak	150kg	722286
1.0	16 – 24	4.5 – 15.0	70 – 200	Spool	15kg	722386
1.0	16 – 24	4.5 – 15.0	70 – 200	Autopak	150kg	722486

* Mini spool (ø100mm); Handi spool (ø200mm); Spool (ø300mm).

AUTOCRAFT AL1100



TYPICAL ALL WELD METAL MECHANICAL PROPERTIES:

Single-vee butt weld with 1060 Aluminium (reduced section tensile specimen):	Welding grade Argon:
0.2% Proof Stress	34.5 MPa
Tensile Strength	69.0 MPa
Elongation (in 2 inches)	29%

WIRE ANALYSIS LIMITS:

Si: 0.06%	Fe: 0.06%	Cu: 0.005%
Mn: 0.01%	Mg: 0.01%	Zn: 0.03%
Ti: 0.01%	Total others: 0.01%	

Al: 99.98% min.

* Single values are maximum allowable, unless otherwise stated.

RECOMMENDED SHIELDING GAS:

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

COMPARABLE CIGWELD PRODUCTS:

Comweld AL1188
AWSR1188

- ▲ A High Purity Aluminium Wire for the GMA Welding of Selected Wrought Aluminium Alloys.
- ▲ Recommended for the joining of selected high purity 1XXX series Aluminium alloys used extensively in electrical and chemical industry applications.

Classifications:

AS/NZS 2717.2:	E1100.
AWS/ASME-SFA A5.10:	ER1100.

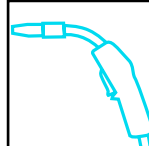
Packaging and Operating Data:

These machine settings are a guide only. Actual voltage and welding current used will depend on machine characteristics, plate For 1XXX, 2XXX and 4XXX type welding wires use welding current settings on the lower side of the specified range and arc voltages on the higher side.

Wire Dia mm	Voltage Range (volts)	Wire Feed Speed (metres/min)	Current Range (amps)	Pack Type*	Pack Weight	Part No
1.6	23 – 28	5.0 – 9.5	200 – 350	Spool	7kg	722218
2.0	25 – 31	4.0 – 8.0	250 – 400	Spool	7kg	723218
2.4	25 – 31	4.0 – 8.0	250 – 400	Spool	7kg	722219

* Spool (ø300mm).

WELDING CONSUMABLES GAS METAL ARC WELDING (MIG) WIRES



AUTOCRAFT AL4043



TYPICAL ALL WELD METAL MECHANICAL PROPERTIES:

Single-vee butt weld with 6061-T6 Aluminium (reduced section tensile specimen) using welding grade Argon:		
	As welded:	Postweld heat treated & aged:
0.2% Proof Stress	124 MPa	276 MPa
Tensile Strength	186 MPa	303 MPa
Elongation (in 2 inches)	8%	5%

WIRE ANALYSIS LIMITS:

Single values are maximum allowable, unless otherwise stated.

Si: 4.5–6.0%	Fe: 0.80%	Cu: 0.30%
Mn: 0.05%	Mg: 0.05%	Zn: 0.10%
Ti: 0.20%	Total others: 0.15%	
Al: Balance		

RECOMMENDED SHIELDING GAS:

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

COMPARABLE CIGWELD PRODUCTS:

Comweld AL4043
AWS R4043

- ▲ An Aluminium -5% Silicon Wire for GMA Welding of Selected Wrought and Cast Aluminium Alloys.
- ▲ For the Repair Welding of Aluminium Alloy Castings (mainly 4XX and 6XX series).
- ▲ For Welding Selected Wrought (1XXX, 5XXX and 6XXX series) Aluminium Alloys.

Classifications:

AS/NZS 2717.2:	E4043.
AWS/ASME-SFA A5.10:	ER4043.

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. For 5XXX type welding wires use welding current settings on the higher side of the range specified below and arc voltages on the lower side of the range. For 1XXX, 2XXX and 4XXX type welding wires use welding current settings on the lower side of the specified range and arc voltages on the higher side.

Wire Dia mm	Voltage Range (volts)	Wire Feed Speed (metres/min)	Current Range (amps)	Pack Type*	Pack Weight	Part No
1.2	20 – 25	5.5 – 12.0	150-250	Spool	7kg	720237
1.2	20 – 25	5.5 – 12.0	150-250	Autopak	70kg	723237
1.6	23 – 28	5.0 – 9.5	200-350	Spool	7kg	720238

* Spool (ø300mm).

AUTOCRAFT AL5356



TYPICAL ALL WELD METAL MECHANICAL PROPERTIES:

Single-vee butt weld with 5086 Aluminium (reduced section tensile specimen):	
Welding grade Argon:	
0.2% Proof Stress	130 MPa
Tensile Strength	269 MPa
Elongation (in 2 inches)	17%

WIRE ANALYSIS LIMITS:

Single values are maximum allowable, unless otherwise stated.

Si: 0.25%	Fe: 0.40%	Cu: 0.10%
Mn: 0.05–0.2%	Mg: 4.5–5.5%	Cr: 0.05–0.20%
Zn: 0.10%	Ti: 0.06–0.20%	
Total others: 0.15%		Al: Balance

RECOMMENDED SHIELDING GAS:

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

COMPARABLE CIGWELD PRODUCTS:

Comweld AL5356
AWS R5356

- ▲ An Aluminium -5% Magnesium Wire for the GMA Welding of a Wide Range of Wrought and Cast Aluminium Alloys containing Magnesium.

Classifications:

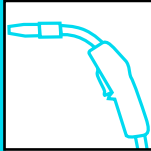
AS/NZS 2717.2:	E5356.
AWS/ASME-SFA A5.10:	ER5356.

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. For 5XXX type welding wires use welding current settings on the higher side of the range specified below and arc voltages on the lower side of the range. For 1XXX, 2XXX and 4XXX type welding wires use welding current settings on the lower side of the specified range and arc voltages on the higher side.

Wire Dia mm	Voltage Range (volts)	Wire Feed Speed (metres/min)	Current Range (amps)	Pack Type*	Pack Weight	Part No
0.8	14 – 21	6.0 – 20.0	50 – 150	Mini Spool (4 per pack)	4 x 0.5kg	721221
0.9	16 – 22	6.0 – 17.5	80 – 180	Spool	7kg	722226
1.0	17 – 23	6.0 – 16.5	110 – 220	Spool	7kg	722224
1.0	17 – 23	6.0 – 16.5	110 – 220	Handi Spool	2.0kg	723224
1.2	20 – 25	5.5 – 12.0	150 – 250	Spool	7kg	722227
1.2	20 – 25	5.5 – 12.0	150 – 250	Autopak	70kg	723227

* Mini Spool (ø100mm); Handi Spool (ø200mm); Spool (ø300mm).



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).