Flux Cored Welding Wires for Mild Steel, Low Alloy Steels & Cast Iron

Verti-Cor 81 Ni1 H4

- Higher strength, low alloy, rutile type flux cored wire
- Formulated for use with either Argon + 20-25% CO_2 or CO_2 shielding gases
- Outstanding operator appeal
- Versatile, all positional capabilities
- Low fume levels
- Precision layer wound

Classifications:

AS/NZS 2203.1:	ETP-GC/Mp-W554A Ni1 H5
AWS/ASME-SFA A5.29:	E81T1-Ni1M H4; E81T1-Ni1 H4

Operating Data:

All welding conditions recommended below are for use with semi-automatic operation, DC electrode positive and welding grade CO_2 shielding gas with a flow rate of 15-20 litres/min.

Wire Dia mm	Current Range (amps)	Voltage Range (volts)	Electrode Stickout (ESO)	Optimum Amps	Volts	Welding Positions
1.2	250-300	27-31	20-25	-	-	Flat
1.6	350-400	27-31	25-30	-	-	
2.0	380-460	28-32	25-30	-	-	
1.2	230-280	26-30	20-25	-	-	HV Fillet
1.6	310-360	26-30	25-30	-	-	
2.0	340-420	27-31	25-30	-	-	
1.2	170-220	24-28	15-20	-	-	Vertical Up
1.6	200-250	24-28	15-20	-	-	
2.0	220-280	24-28	20-25	-		
1.2	160-210	24-28	15-20	-	-	Overhead
1.6	190-240	23-27	15-20	-	-	
2.0	210-270	23-27	20-25	-	-	

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

TYPICAL ALL WELD METAL MECHANICAL PROPERTIES:

	Using Ar+20-25% CO_2:	Using CO_2:
Yield Stress	540 MPa	500 MPa
Tensile Strength	600 MPa	560 MPa
Elongation	22%	23%
CVN, Impact Values	85J av @ -50°C.	75J av @ -50°C

TYPICAL ALL WELD METAL ANALYSIS:
Using Argon +20-25% CO_2:
C: 0.06% Mn: 1.40% Si: 0.5%
Ni: 1.0%
Using CO_2:
C: 0.05% Mn: 1.1% Si: 0.38%
Ni: 1.16%

TYPICAL DIFFUSIBLE HYDROGEN LEVELS TO AS3752:
<3 mls of hydrogen / 100gms of deposited weld metal *.
*for "as manufactured" product using Argon +20-25% CO_2 or CO_2.

APPROVALS*:
LRS Grade 4Y, 4YS H10.
ABS Grade 4YSA H5.
DNV IV YMS H10.
*with Argon +20-25% CO_2 or CO_2 shielding gases.

RECOMMENDED SHIELDING GASES:
- Argon + 20-25% CO_2 or equivalent ISO14175: M21
- Welding Grade CO_2 ISO14175: C1

Packaging Data:

Wire Dia mm	Pack Type*	Pack Weight	Part No
1.2	Spool	15kg	720550
1.6	Spool	15kg	720551
2.0	Spool	15kg	720591
2.0	Coil	25kg	720592

* Spool (ø300mm);

Verti-Cor 91 K2 H4

- A higher strength low alloy steel, rutile type flux cored wire
- Formulated for use with Argon +20-25% CO_2 shielding gases.
- Versatile, all positional capabilities.
- Excellent operator appeal.
- A nominal 1.5% Nickel Steel deposit of the 620 MPa tensile class.
- Typical applications include the full strength butt welding of Bisalloy 60 or the under matching strength fillet welding of Bisalloy 70 and 80 steels.

Classifications:

AS/NZS 2203.1:	ETP-GMp-W629A. K2 H5.
AWS/ASME-SFA A5.29:	E91T1-K2M H4

Operating Data:

All welding conditions recommended below are for use with semi-automatic operation, DC electrode positive and welding grade CO_2 shielding gas with a flow rate of 15-20 litres/min.

Wire Dia mm	Current Range (amps)	Voltage Range (volts)	Electrode Stickout (ESO)	Optimum Amps	Volts	Welding Positions
1.2	250 – 300	27 – 31	20 – 25	280	31	Flat
1.6	350 – 400	27 – 31	25 – 30	360	31	
1.2	230 – 280	26 – 30	20– 25	260	28	HV Fillet
1.6	310 – 360	26 – 30	25 – 30	320	29	
1.2	170 – 220	24 – 28	15 – 20	200	24	Vertical up
1.6	200 – 250	24 – 28	15 – 20	240	25	
1.2	160 – 210	24 – 28	15 – 20	200	24	Overhead
1.6	190 – 240	24 – 28	15 – 20	220	24	

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

TYPICAL ALL WELD METAL MECHANICAL PROPERTIES:

	Using Argon +20-25% CO_2:
Yield Stress	560 MPa
Tensile Strength	660 MPa
Elongation	23%
CVN Impact Values	30J av @ -50°C

TYPICAL ALL WELD METAL ANALYSIS*:
C: 0.06% Mn: 1.30% Si: 0.50%
Ni: 1.60% Ti: 0.035% B: 0.007%.
*Using Argon +20-25% CO_2

TYPICAL DIFFUSIBLE HYDROGEN LEVELS TO AS3752:
3.0-3.5 mls of hydrogen / 100gms of deposited weld metal *.
* for "as manufactured" product using Argon +20-25% CO_2.

RECOMMENDED SHIELDING GAS:
- Argon + 20-25% CO_2

COMPARABLE CIGWELD PRODUCTS:
Alloycraft 90 MMAW

Packaging Data:

Wire Dia mm	Pack Type*	Pack Weight	Part No
1.2	Spool	15kg	720554
1.6	Spool	15kg	720555

* Spool (ø300mm);