



VERTI-COR 81 Ni2 Product data sheet



HIGHER STRENGTH LOW ALLOY, RUTILE TYPE FLUX CORED WIRE



FLUX CORED ARC WELDING (FCAW) WIRES

VERTI-COR 81 Ni2

- Higher Strength Low Alloy, Rutile Type Flux Cored Wire.
- Formulated for use with either Argon + 18-25% CO₂ or CO₂ Shielding Gases.

CLASSIFICATIONS:

ISO AS/NZS 17632:				
AWS/ASME-SFA A5.29:				

B T 55 4 T1 1 M A N5 U H10 E81T1-Ni2M H8

· Low Fume Levels.

• Versatile, All Positional Capabilities.

Outstanding Operator Appeal.

TYPICAL ALL WELD METAL ANALYSIS:

USING ARGON + 25% CO ₂ :	
C:	0.02%
Mn:	1.16%
Si:	0.51%
Ni:	2.0%

TYPICAL ALL WELD METAL MECHANICAL PROPERTIES:

USING ARGON + 25% CO ₂ :	
Yield Stress	590 MPa
Tensile Strength	660 MPa
Elongation	27 %
CVN Impact Values	70 J av @ -40°C





DESCRIPTION AND APPLICATIONS:

Verti-Cor 81 Ni2 is a higher strength rutile type flux cored wire suitable for the all positional welding of medium to high strength steels using Argon + 18-25% $\rm CO_2$ or equivalent.

Verti-Cor 81 Ni2 produces a low alloy (nominally 2% Nickel) steel weld deposit of the 550 Mpa tensile class. It is easy to use in all positions and produces smooth arc transfer characteristics, low spatter levels, mitre fillet welds and a full covering, easily releasing slag, similar to Verti-Cor 81 Ni1.

Verti-Cor 81 Ni2 is suitable for the fillet and butt welding of a broad range of higher strength steels in all welding positions except vertical down. Typical applications include the under matching strength welding of Bisalloy 60,70 & 80 and aluminium killed steels for low temperature service such as off shore platforms.

TYPICAL WELD METAL MECHANICAL PROPERTIES:

Actual weld metal mechanical properties achieved with Verti-Cor 81 Ni1 H4 are influenced by many factors including, base metal analysis, welding parameters/ heat input used, shielding gas selection, number of weld passes and run placement, etc. Please contact CIGWELD for welding procedure recommendations.

TYPICAL DIFFUSIBLE HYDROGEN LEVELS TO AS3752:

<8 mls of hydrogen / 100gms of deposited weld metal for as manufactured product using Argon +25% $\rm CO_2.$

TYPICAL DIFFUSIBLE HYDROGEN LEVELS TO AS3752:

USING ARGON + 18-25% 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%			

RECOMMENDED SHIELDING GAS:

AS 4882:	SG-AC-18, OR SG-AC-20 AR+CO ₂ (18-25%)
ISO 14175 / AWS A5.32:	M21*- CERT SUPPLIED

PACKAGING DATA:

WIRE DIAMETER (MM)	TYPE	PACK WEIGHT	PACK PART NO.
1.6	Spool	15kg	722391





OPERATING DATA:

All welding conditions recommended below are for use with semi-automatic operation, DC electrode positive using Argon + 18-25% CO₂ shielding gas with a flow rate of 15-20 litres/min.

WIRE DIAMETER (MM)	CURRENT RANGE (AMPS)	VOLTAGE RANGE (VOLTS)	CTWD	WELDING Position	
1.6	350-400	27-31	25-30		Flat
1.6	310-360	26-30	25-30		HV Fillet
1.6	200-250	24-28	15-20		Vertical Up
1.6	190-240	24-28	15-20		Overhead

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





