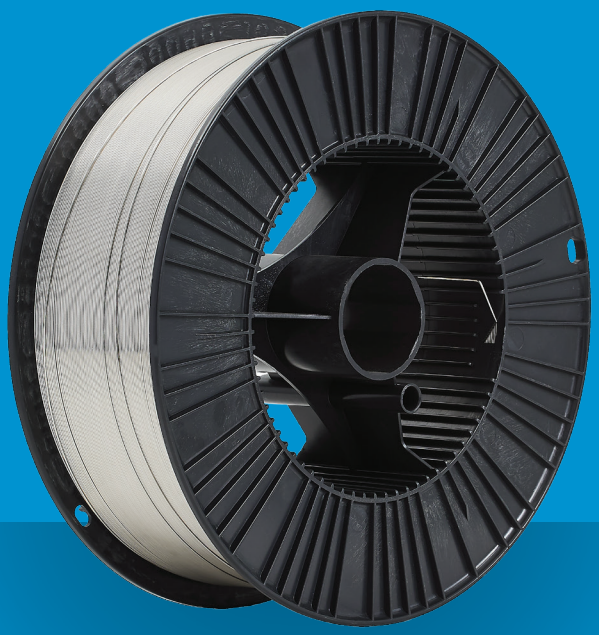
CIGWELD

AN ESAB BRAND

FCAW



VERTI-COR 81 Ni1 H4 - SEAMLESS

PRODUCT DATA SHEET

HIGHER STRENGTH LOW ALLOY, RUTILE TYPE FLUX CORED WIRE

FLUX CORED ARC WELDING (FCAW) WIRES

VERTI-COR 81 Ni1 H4 - SEAMLESS

- Next generation technology flux cored laser welded seamless wire.
- Non-Copper-Coated for smooth consistent feedability and current pick up.
- Higher Srength Low Alloy, Rutile Type seamless Flux Cored Wire.
- Versatile, all positional capabilities.
- Outstanding Operator Appeal.
- Formulated for use with Argon + 25% CO2
- Low No copper coating equates to very low Fume Levels.
- Precision Layer Wound.

CLASSIFICATIONS:

ISO AS/NZS 17632:	**B T 55 5 T1 1 C A N2 U H5** **B T 55 5 T1 1 M A N2 U H5**
AWS/ASME-SFA A5.29:	**E81T1-Ni1M JH4; E81T1-Ni1 JH4**

RECOMMENDED SHIELDING GAS:

AS 4882:	**SG-AC-18, OR SG-AC-20**
ISO 14175 / AWS A5.32:	**M21*- CERT SUPPLIED**

Welding grade Ar+CO_2 (18-25%)

TYPICAL ALL WELD METAL MECHANICAL PROPERTIES:

USING ARGON + 18-25% CO_2:	
Yield Stress	**540 MPa**
Tensile Strength	**600 MPa**
Elongation	**22%**
CVN Impact Values	**85 J av @ -50°C**

TYPICAL ALL WELD METAL ANALYSIS:

USING ARGON + 18-25% CO_2 SHIELDING GAS:	
C:	**0.06%**
Mn:	**1.40%**
Si:	**0.5%**
Ni:	**1.0%**

CIGWELD Data Sheet **VERTI-COR 81 Ni1 H4 - SEAMLESS V1-2023**
CIGWELD Pty Ltd An ESAB Brand.
www.cigweld.com.au

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ESAB

V1-2023

DESCRIPTION AND APPLICATIONS:

Verti-Cor 81 Ni1 H4 is a seamless, low-hydrogen (H4) non-copper-coated flux cored wire. It features laser welded seams to combat moisture absooption in humid environments, delivering impact toughness to below -50 deg C. This wire is a higher strength rutile type seamless flux cored wire suitable for the all positional welding of medium to high strength steels using Argon + 18-25% CO_2 shielding gas. Verti-Cor 81 Ni1 H4 produces a low alloy (nominally 1% Nickel) steel weld deposit of the 550 Mpa tensile class.

Verti-Cor 81 Ni1 H4 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.

The advanced non-copper-coated tube technology gives rise to several unique features and benefits including:

- Improved wire feeding which eliminates "bird nests" at the wirefeeder.
- Improved current transfer at the welding torch for smooth, consistent arc starting.
- "Very low AWS: H4 and AS: H5 diffusible hydrogen status for improved resistance to hydrogen induced cold cracking of the weld deposit.

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:

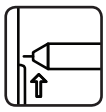
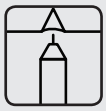
<3 mls of hydrogen / 100gms of deposited weld metal for as manufactured product using Argon + 18-25% CO_2 .

PACKAGING DATA:

WIRE DIAMETER (MM)	TYPE	PACK WEIGHT	PACK PART NO.
1.2	Spool	15kg	720550
1.6	Spool	15kg	720551

OPERATING DATA:

All welding conditions recommended below are for use with semi-automatic operation, DC electrode positive using Argon + 18-25% CO_2 shielding gas with a flow rate of 15-20 litres/min.

WIRE DIAMETER (MM)	CURRENT RANGE (AMPS)	VOLTAGE RANGE (VOLTS)	CTWD	WELDING POSITION	
1.2 1.6 2.0	250-300 350-400 380-460	27-31 27-31 28-32	20-25 25-30 25-30		Flat
1.2 1.6 2.0	230-280 310-360 340-420	26-30 26-30 27-31	20-25 25-30 25-30		HV Fillet
1.2 1.6 2.0	170-220 200-250 220-280	24-28 24-28 24-28	15-20 15-20 20-25		Vertical Up
1.2 1.6 2.0	160-210 190-240 210-270	24-28 24-28 23-37	15-20 15-20 20-25		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.